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OFFICIAL JOURNAL OF THE PHARMACEUTICAL SOCIETY OF NEW ZEALAND

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Preliminary Examination.—November 16.

Intermediate Examination.—November 7.

Final Examination.—November 15.

Entries for the Preliminary and Intermediate Examinations close fourteen days, and for the Final Examination twenty-one days, before the date of commencement of the Examination.

Full details obtainable from the office of the Board.

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The next Qualifying Examination will
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Watch this column for further advice.

P. E. COSGRAVE,

Registrar, Pharmacy Board of N.S.W.
52 Bridge Street,
SYDNEY.

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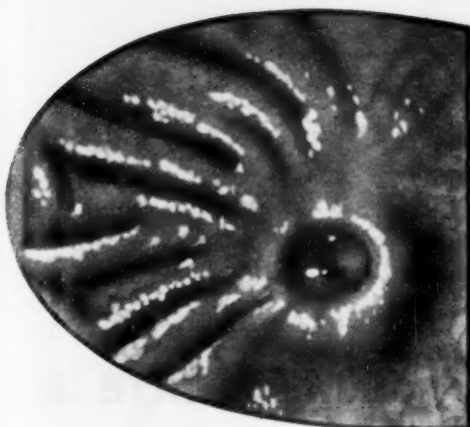


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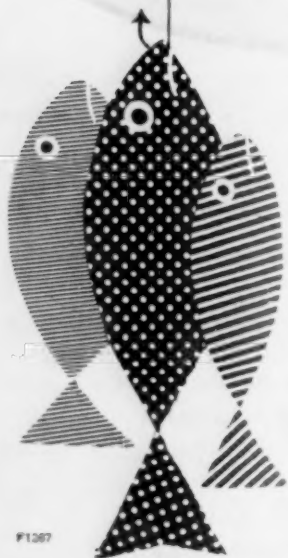
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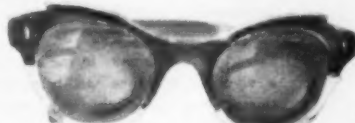


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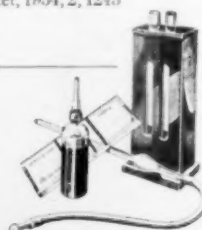
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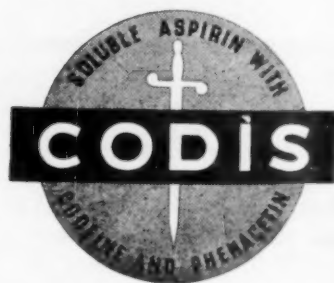
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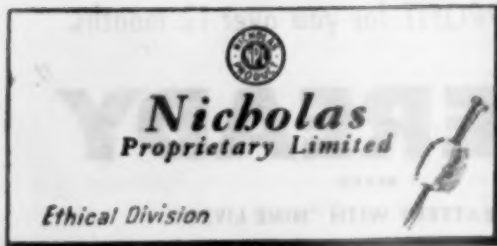
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UA 1



Editorial

New Series: Vol. 36—No. 428

Old Series: Vol. LXX—No. 836

August 30, 1955

The Science Congress

IF numbers count for anything, science appears to be on the march in this country.

Enrolment of members for the 32nd meeting of the Australian and New Zealand Association for the Advancement of Science, held in Melbourne from August 17-24, exceeded 3000, and easily constituted a record.

In Section "O" (Pharmaceutical Science) there were more than 200 enrolments—a number greatly in excess of any previous conference, and this in spite of the fact that on this occasion a meeting of the Pharmaceutical Association of Australia was not held concurrently. Delegates included representatives from every State except one, from the Australian Capital Territory and from New Zealand.

This was no token representation. A feature of the Section "O" meetings was the splendid attendances at the section meetings. The delegates from every State were predominantly youthful, and meetings were marked by the interest and enthusiasm characteristic of youth. Three of the State pharmaceutical societies sponsored the attendance of small groups of students at the meetings, and these young people rubbed shoulders with more seasoned conference veterans, participating in the discussions and helping to make a well-balanced conference.

Supporters of the view that pharmacy should maintain and strengthen its association with A.N.Z.A.A.S. must have been heartened and encouraged by this meeting. Some of the Section "O" sessions attracted many visitors from other sections, and pharmaceutical delegates freely attended sectional meetings in the other branches, sometimes en masse and at others individually, at their particular interests directed them.

A noticeable feature of the conference week was the happy fraternal spirit everywhere discernible.

A very full programme of papers, symposia and discussions was provided. At the two evening meetings—one a symposium on the new A.P.F. and the other a symposium on colour photography, accommodation of the largest lecture theatre in the Victorian College of Pharmacy was taxed to the limit, demonstrating the keen interest of members generally, and justifying the decision of the Section Committee to hold evening

meetings for the benefit of members unable to attend daytime sessions.

The Presidential Address by Mr. S. E. Wright, Senior Lecturer in Pharmacy, University of Sydney, is printed in this issue of the Journal, and in the September and October issues we hope to publish most of the other papers read, as well as summaries of the discussions which took place.

Australians were delighted to welcome among them at the conference two New Zealand visitors—Mr. N. Wilson, President of the Chemists' Services Guild of New Zealand, and Mr. J. S. Peel, Chief Pharmacist of the Napier Hospital, Napier, New Zealand. Both won their way immediately to the hearts of the local members whom they impressed by their deep interest in every facet of pharmaceutical practice and pharmaceutical organisation in this country, by their intense desire to gather and impart information, and by their spontaneous friendliness. It is not too much to hope that as a result of the visit of these two gentlemen the ties between the Commonwealth and the Dominion, in a pharmaceutical sense, may be strengthened.

The representative nature of the attendances at sectional meetings, the keenness of the members and the interest aroused by the meeting augured well for the future of Section "O."

Even a sceptic within pharmaceutical ranks must acknowledge the debt of pharmacy to the research workers in the fields of pharmaceutical science, pharmacology, bio-chemistry, organic chemistry and other sciences and the inter-dependence of each of these sciences.

A brief inspection of the shelves of our pharmacies would show that two-thirds of the materials found on them today are the result of investigations carried out in the great research institutions and laboratories of pharmaceutical manufacturers. Scientific research and commercial enterprise march hand in hand with destinies interlocked. At the far end of the scale the path of individual pharmaceutical practitioners is distinctly influenced by this work.

A.N.Z.A.A.S. sectional meetings are one of the principal sources from which scientific workers and researchers of tomorrow will be drawn. Pharmacy as a whole, therefore, should take an intelligent interest in what is going on at these meetings, and give at least its moral support to the workers in this field.

THE MONTH

News of Pharmaceutical Events at Home and Abroad

New A.P.F. to Operate from 1st October

The Executive of the Pharmaceutical Association has made a recommendation to all States that the new A.P.F. recently published should come into operation on October 1, 1955.

No legal machinery applies to the date of commencement of the A.P.F., which is adopted as a legal standard only in Victoria. Even in that State no provision is made for proclaiming the date when a new edition is to apply.

It is desirable, however, in the interests of uniformity throughout the Commonwealth, and to avoid confusion with new formulae, that monographs included in a national formulary should apply simultaneously in all States.

The Ban on Heroin

The outlawing of Heroin has become a controversial topic of discussion in Great Britain and elsewhere, certain sections of the medical profession having given expression to very strong views on the matter. It is claimed by some that in the treatment of some conditions there is no substitute for this drug. On July 11, representatives of the British Medical Association in Great Britain, headed by the President of the Association, proceeded as a deputation to the Home Secretary.

They stated that medical practitioners feel strongly that they should not be prevented from prescribing a drug which many of them think indispensable in certain types of cases. They further asserted that the Government could not claim to have ascertained the views of the medical profession before arriving at its decision.

The Home Secretary replied that the Government had taken over four years to consider the matter, and had consulted a number of bodies representative of the medical profession. He told the deputation that the B.M.A. had had ample opportunity to make its views known. In July, 1953, the British Medical Journal had published an article which clearly contemplated that prohibition might be imposed, and the article had evoked one solitary letter of protest. The Home Secretary pointed out, however, that the matter was not merely a domestic problem, and that the prohibition was part of an international effort to mitigate the Heroin problem. To permit the manufacture of Heroin in Great Britain, but to prohibit export, would not

comply with the Economic and Social Council's resolution.

Meanwhile, in Australia the difficulties associated with independent administration in the States are showing themselves. Simultaneous joint action in relation to such a matter is most desirable, but instead of that, two States have decreed that on dates which have been proclaimed the possession and use thereafter will be prohibited. It has been suggested that rather than destroy stocks of the drug persons holding them will endeavour to negotiate disposals in States where possession is not yet illegal. Whilst it is understandable from an international viewpoint that it may be desirable to eliminate Heroin, it is less easy to comprehend the decision that unused stocks in possession of doctors, pharmacists, hospitals, etc., must be destroyed at a given date.

British Pharmaceutical Students' Association—Recommendations to be Considered

In the report of the meeting of the Council of the Pharmaceutical Society of Great Britain, published in the *Pharmaceutical Journal* on July 16, 1955, reference is made to consideration of a report from the British Pharmaceutical Students' Association Conference of 1955.

The Students' Association submitted 12 recommendations, of which four were referred by the Council to its Educational Policy Sub-Committee. The four resolutions were:—That Organic Chemistry should be included in the Intermediate Examination syllabus; that the Intermediate Examination be revised or abolished; that Universities' Forensic Pharmacy examination be recognised for registration requirements, or that the Society's examination in this subject be taken at the same time; and that the Society should ensure that the course of training of apprentices recommended to apprentice masters was more conscientiously implemented, so as to integrate this period with the course of study for qualification.

Are We Spending Too Much?

Sir Arthur Fadden's Budget has not been received favourably because of its failure to reduce taxes. No Budget which fails to grant taxation relief will ever be popular with the taxpayer, whatever the justification

for it. That there has in the past been over-spending is a view shared with the Treasurer by some authorities, although taxpayers in every income group are loth to admit that they have more spending money than is desirable.

The Monthly Summary of Australian Conditions, issued by the National Bank of Australasia Ltd., for August, 1955, states: "If there is any single characteristic which typifies the Australian economy at present, it is that the overall level of spending by Governments, businesses and individuals is too high. In consequence, internal resources are strained, and the demand for imports is higher than current overseas earnings." The commentator goes on to state that some check to spending is essential, and wisely suggests that the choice of remedy is between alternative methods—restraining expenditure and stimulating production.

French Technical Co-operation Scholarships

The French Government is initiating a scheme to improve Franco-Australian technical co-operation. It is anticipated that two scholarships will be granted for study in France in 1956.

These scholarships are for graduates of a University or Technical College in engineering, metallurgy or science, between the ages of 25 and 35, who are in good health and have had at least two years' practical experience. Some knowledge of French would be considered an advantage. Scholarships will be granted to candidates wishing to go overseas to widen their knowledge, either in colleges and institutes or in public or private enterprises.

The monthly allowance amounts to 60,000 francs (approximately £A75) for a maximum stay of six months. Scholarship holders will be entitled to:—

- (1) Reimbursement of expenses incurred for second class rail travel in France;
- (2) Payment of expenses connected with studies, regulation fees and laboratory fees;
- (3) An allowance for the purchase of books and research documents amounting to 10,000 francs per person;
- (4) The cost of tourist class travel from France to Australia. Scholarship holders will be required to pay for their own passages from Australia to France. In addition to the possibility of scholarship holders working their passages, there is a possibility of passages being secured at reduced rates.

All scholarship holders must at the end of their stay in France compile a report in triplicate on their activities or studies whilst there.

The fields in which French techniques seem to be of

particular interest to Australian engineers are broadly as follows:—

Hydraulics.
Public Works (particularly pre-stressed concrete techniques).
Aeronautics.
Power Generation.
Electric Traction on Railways.
Metallurgy.

But this list is by no means restrictive.

Applications must reach the office of the Commercial Counsellor to the French Embassy, 72 Pitt street, Sydney, by October 15, 1955.

A.P.F. Exhibit at Australasian Medical Congress

At the ninth session of the Congress of the British Medical Association, held in Sydney during the period August 20 to 26, a successful exhibit of the 1955 Australian Pharmaceutical Formulary was staged by the Pharmaceutical Association of Australia.

The display, which included representative preparations from the new A.P.F., together with samples of preparations for distribution to medical men, created considerable interest, and as a means of publicising the new edition of the Formulary cannot be over-estimated.

Messrs. H. W. Read and F. H. Burton were in attendance at the exhibit on behalf of P.A.A., and it was found that while general interest in the publication was high, predominant interest was shown by dermatologists, ophthalmologists and pediatricians, from whom a considerable number of orders for the new volume were booked.

Among other things, the inclusion of the new morphine and barbiturate antagonists, Amiphenazole and Bemegride, in the Monograph section and the section on Poisons, Antidotes and Treatment, was brought to the notice of medical men, as also was the new Therapeutic Index, and the inclusion of formulae for contact lens solutions and the revised and enlarged section on Eye-Drops.

The 1955 A.P.F. was also displayed, and made available for reference to a number of ethical manufacturers at the Trades Exhibition, in order that the widest possible publicity be given to the new volume. A brochure, "Introducing the 1955 Australian Pharmaceutical Formulary to the Medical Profession of Australia," was available from all sources where the A.P.F. was displayed, and an estimated 1000 or more were distributed during congress.

The samples available for distribution to the medical profession at the exhibition (to which previous reference has been made) bore printed labels and were well presented. These were prepared by Messrs. F. H. Faulding and Co., to whom the thanks of the Pharmaceutical Association of Australia are due.

Australian and New Zealand Association for the Advancement of Science

A.N.Z.A.A.S.

Thirty-First Meeting

MELBOURNE

AUGUST 17-24, 1955

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HIS EXCELLENCY GENERAL SIR DALLAS BROOKS, K.C.B., K.C.M.G., D.S.O., Governor of Victoria.

President:

PROFESSOR R.v.d. R. WOOLLEY, O.B.E., Sc.D., F.R.S.

Presidential Address: "Astronomy and Cosmology."

Hon. General Secretary: Professor J. R. A. McMillan, M.S., D.Sc. Agr.

Hon. Secretary for Melbourne Meeting: N. H. Olver, M.Sc., A.R.A.C.I.

SECTION O—PHARMACEUTICAL SCIENCE

President: S. E. Wright, M.Sc., Dip. Pharm., A.R.I.C., Department of Pharmacy, University of Sydney.

Presidential Address: "The Problem of the Relationship of Molecular Structure and Pharmacological Activity in the Cardiac Glycosides."

Vice-Presidents: R. G. Smith, M.P.S., A.R.A.C.I., Melbourne; R. A. Anderson, B.Sc., A.U.A., Adelaide; R. S. Greig, Ph.C., M.P.S., Brisbane; Dorothy K. Large, B.Sc., Dip. Pharm., Sydney; E. J. Nicholas, M.P.S., Perth; J. S. Peel, M.P.S., Napier, N.Z.

Hon. Secretary, Section O: E. E. Nye, B.Sc., F.P.S.

Place of Meeting: College of Pharmacy, 360 Swanston St., C.I.

PUBLIC LECTURES OF THE CONFERENCE

"The Artificial Modification of Rainfall," by E. G. Bowen, O.B.E., M.Sc., Ph.D. (Chief, Division of Radiophysics, C.S.I.R.O.).

"Preventive Medicine, Past and Future," by Professor Sir Macfarlane Burnet, M.D., Ph.D., D.Sc., F.R.S., F.R.C.P. (Director, Walter and Eliza Hall Institute of Medical Research).

Public Discussion: "Benefits and Problems of the Atomic Age."

Leaders:

Professor E. W. Titterton, Ph.D., Dip.Ed.

Professor D. G. Catcheside, M.A., D.Sc., F.R.S.

"The Ecology of Desert Plants," by Professor F. W. West, Ph.D. (California Institute of Technology, U.S.A.).

Forum: "Will Science Explain the Nature of Life?"

A.N.Z.A.A.S., Melbourne Meeting, 1955

Section O—Pharmaceutical Science

The last A.N.Z.A.A.S. meeting to be held in Melbourne was in January, 1935. It was Melbourne Centenary Meeting. On that occasion the President of the Conference was Sir Douglas Mawson, and his presidential address "The Unveiling of Antarctica."

The Liversidge Lecture (1935) was given by Sir David Orme Masson; the subject, "Crucial Advances in Chemical Theory During the Last Half Century."

In Section O, Pharmaceutical Science, Dr. Roy Gardner, of Dunedin, New Zealand, was Section President. His address was entitled "The Relative Positions in Materia Medica of Inorganic, Synthetic Organic and Natural Organic Sub-

stances. Contributors to Section O in 1935 included A. R. Penfold, Horace Finnemore, P. A. Berry, Ivan Rosenblum, B. L. Stanton and A. T. S. Sissons.

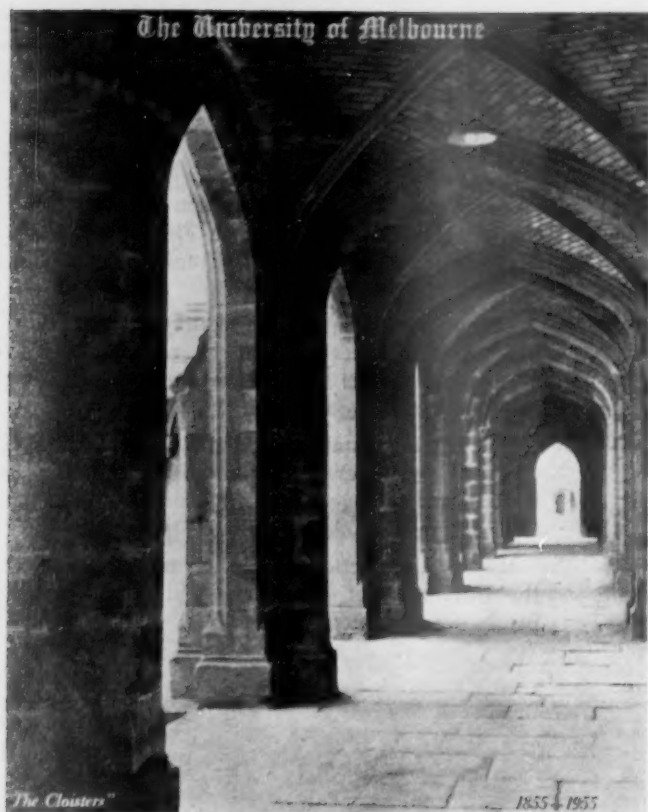
The present meeting (the thirty-first meeting) has attracted a record number of members to Melbourne. It has aroused great interest, and has received a very good press.

There are a number of visiting scientists from overseas, and several other important conferences have been arranged, either just before or just after the A.N.Z.A.A.S. meeting.

Most of the Sections held their meetings within the University of Melbourne and in the appropriate departments.



Melbourne University and Grounds



All the facilities of the University Union were available to members.

The University of Melbourne is about to celebrate its Centenary, and visitors have had an opportunity to observe its recent growth, its active building programme, and the steady decrease of its gardens, lawns and playing areas.



Library and Museum, Melbourne: Where public lectures A.N.Z.A.A.S. were held.

Public Meetings were held in the Melbourne Town Hall and the Main Hall of the National Museum of Victoria.

Section O—Pharmaceutical Science held its sessions at the College of Pharmacy.

Like the general conference, Section O had an all-time record enrolment, which included 50 visiting members from the other States and New Zealand. In addition to the Science Sessions, there was a full programme of social fixtures and excursions.

The symposium on The New A.P.F. attracted a large attendance, and much interest was shown in the new book and some of its distinctive features.

In addition to its own meetings, Section O attended the Presidential Address of Section B (Chemistry), "The Kerr Effect in Chemistry," Professor R. J. W. Le Fevre (Sydney), and the Liversidge Lecture, "New Trends in Fats Research," Dr. F. B. Sharland (D.S.I.R., New Zealand).

Many of our members visited Sections B (Chemistry), I (Preventive Medicine) and N (Physiology and Biochemistry).

The Science Papers will be published in the next few issues of A.J.P., and there will be separate reports on the various functions and incidents of the week.

The meeting imposed heavy preparation and much detailed organisation, and for this thanks are due to the Honorary Section Secretary, Mr. E. E. Nye, and the committees that gave such good support. Arrangements within the college owed much to the unseen work of Mr. N. W. Coe.



Hotel Windsor: "H.Q." for many Interstate members.

The Problem of the Relationship of Molecular Structure and Pharmacological Activity in the Cardiac Glycosides

S. E. Wright, M.Sc., Dip.Pharm., A.R.I.C., Senior Lecturer in Pharmacy, University of Sydney

In his Presidential Address to this Section of A.N.Z.A.A.S. in 1932, Mr. H. Finemore, then Lecturer in Pharmacy at the University of Sydney, discussed some aspects of the work which he and his colleagues had been carrying out on cyanogenetic glucosides found in Australian plants. We have been investigating another group of plant glycosides—those commonly known as cardiac glycosides—in conjunction with the Department of Pharmacology. As well as isolating new glycosides from plants growing in Australia, we have been interested during the past four or five years in the metabolism of these substances in animals and in methods of analysing them by paper chromatography. The cardiac glycosides provide a great deal of interesting material for study, and they form a very suitable subject for research in a school where pharmacy and pharmacology are closely integrated. The field is one in which projects of different levels of complexity, both pure and applied, may be followed, and we have found that junior and senior workers have been able to combine their efforts very successfully in producing results and devising methods which have been of great assistance to all concerned.

There is, however, one aspect of the problem which does appear to us to be both important and attractive, as well as requiring the concerted efforts of both chemists and pharmacologists. The molecular structure of the clinically important cardiac glycosides such as digoxin, digitoxin and lanatoside C has been reasonably well established in the past few years. These compounds, however, have no synthetic rivals. Not only does the synthesis of a naturally occurring glycoside remain unaccomplished, but so far no similar molecule has been prepared which possesses cardioactive properties even approaching those of the plant glycosides.

Part of the difficulty met with in preparing synthetic substitutes with perhaps less toxic properties is, we feel,

due to the lack of precise knowledge of the true relationship between molecular structure and pharmacological activity. In the past, a large number of compounds, both natural and synthetic, has been systematically tested for activity, and a good many generalisations concerning their relationship have emerged. It is apparent, however, that many important anomalies exist, and we believe that these have not yet been pursued

sufficiently. I am therefore taking this opportunity to make a brief review of the position, and to present some of the aspects of the problem which my colleagues and I feel need further study.

Chemical Structure

By far the greatest amount of data concerning the relationship of chemical constitution and pharmacological activity in this group of drugs has been gathered together by Chen and co-workers, and has been summarised in reviews 12345.

This group has examined 150 different cardiac glycosides and derivatives. The results obtained from this extensive survey rely mainly upon the measurement of the cat lethal dose, and assume that the toxic effect of a glycoside is an extension of its cardiotonic effect upon which the therapeutic action of the substance depends. In this method the glycoside is in-

jected intravenously into the intact animal, and circulates in the blood through all organs. Chen has also used both the frog lymph-sac toxicity method⁶⁷⁰⁹ and the toxic effect upon the isolated frog heart¹⁰ in more limited surveys, with, on the whole, the same result as found by the cat method. The results of these surveys are quoted widely in the literature, and some examples of lethal doses for a few typical glycosides or genins are shown in Table I.

The important conclusions drawn from this work of Chen and co-workers can be used as a basis for the discussion of the problem.



Mr. S. E. Wright, President Section "O".

TABLE I

	Cat Lethal Dose (mg/Kg.)
Digitoxin	0.325
Digitoxigenin	0.459
Digoxin	0.231
Digoxigenin	0.441
Lanatoside C	0.233
Ouabain	0.116
Strophanthin-k	0.128
Uzarin	4.58
Convallotoxin	0.079

The glycoside digitoxin possesses what appears to be the simplest active steroidal genin in this series (Fig. 1A). This molecule has an unsaturated lactone ring characteristic of cardiac glycosides attached in the beta position at C-17 in the steroidal nucleus. It has angular methyl groups at 10 and 13; beta-hydroxyl groups at 3 and 14; and the rings are arranged stereochemically as follows:—A/B cis; B/C trans; C/D cis (Fig. 1B). These structural features of the molecule appear to be the most fundamental ones in relation to activity, and we may now examine the effect of their alteration or elimination on the toxicity of various glycosides and genins:

The Lactone Ring

It is reasonably well established that interference with the lactone ring results in a loss of toxicity. Thus Chen and Elderfield⁷ have shown that dihydrostrophanthidin (Fig. 1 C) is inactive, whilst Jacobs and Hoffman¹¹ found that dihydrocymarin is about 1/20 and dihydro-ouabain is about 1/16 times as active as the respective glycosides when tested by frog toxicity methods. Lowered toxicity has also been reported for dihydrodigitoxin and dihydrodigoxin when tested on embryonic chick hearts and on guinea pigs in the Pharmacological laboratories at Sydney. Epimerisation of the lactone ring so that it becomes alpha-orientated also results in considerable loss of activity. This is seen, for example, in allocymarin¹² and alloglaucogenin.¹³ Saponification of the lactone ring results in complete loss of activity.¹

From this evidence it appears that the alpha:beta - unsaturated lactone ring, which may be 5-membered as in the digitalis group, or 6-membered as in the Squill glycosides (Fig. 1 D), is essential for the cardiotoxicity of these molecules. This ring must be beta-orientated, and hydrogenation of the unsaturated linkage interferes with its action to a very great extent.

The 14-beta Hydroxyl Group

This hydroxyl group appears in all active cardiac glycosides. When it is removed, as in the formation of $\Delta^{14:15}$ anhydrogenins, there is a loss in toxicity¹⁴ (Fig. 2 A). Furthermore, if the 14-hydroxyl group is involved in a linkage with the lactone ring, an inactive

compound is produced, as seen in isostrophanthidin⁷ (Fig. 2 B). In this compound, however, the lactone ring has also become saturated. Pseudostrophanthidin (Fig. 2 C) also has a low cat toxicity (66.7 mgm. per Kg.). In this substance the 14-hydroxyl group has shifted to position 8, and become involved in a 6-membered lactol ring with the C-10 aldehyde group.

Stereochemistry of the Steroid Nucleus

The cardiac genins are the only naturally occurring steroid compounds possessing a cis arrangement of rings C and D. When the 14-hydroxyl group is removed, as in the $\Delta^{14:15}$ anhydrogenins, this stereochemical relationship is destroyed, so that loss of toxicity could be due either to the loss of the 14-hydroxyl group or to the alteration of the cis C/D ring arrangement. As yet no cardiac genin, either natural or synthetic, has been found or prepared in which rings C and D are arranged cis without a hydroxyl group being present in position 14.

It is therefore not possible to state at present whether the 14-hydroxyl group *per se* is necessary for activity, or whether the cis arrangement of rings C/D, and hence the shape of the molecule, is mainly responsible for potency.

The glycoside adynerin has been reported to be inactive,⁶ and according to Tschesche and co-workers¹⁴ it possesses an unsaturated linkage between C 8 and C 9 (Fig. 2D). This is the only known example of a cardiac glycoside having an unsaturated linkage in this position, and its effect upon the shape of the molecule is quite important. When the trans-arrangement of rings B/C is lost in the formation of this 8-9 double bond, the molecule becomes flattened in this region. It would appear therefore that the normal trans B/C junction characteristic of natural steroids is essential for activity.

The stereochemistry of ring A/B is normally the cis arrangement, and for a long time it was thought that this was critical for activity, as uzarigenin (Fig. 3A) with a relatively low toxicity⁵ has a trans A/B con-

FIGURE 1

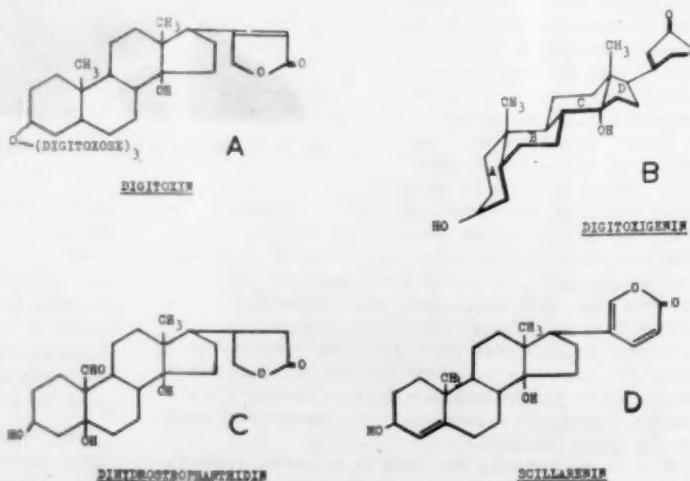
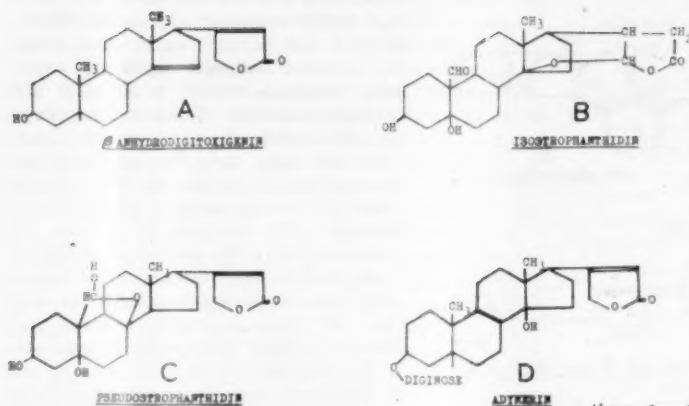


FIGURE II



figuration. The rest of the molecule is the same as digitoxigenin. However, recent work has shown that corotoxigenin (Fig. 3B) and coroglaucigenin (Fig. 3C) both have a trans A/B arrangement,^{15, 16} but their respective glycosides, gofruside and frugoside, have L.D. cat toxicity levels of 0.19 and 0.161 mgm. per Kg. respectively, indicating that they are more toxic than digitoxin. Furthermore, it should be pointed out that rings A and B exhibit no stereochemistry in scillaren, which has a $\Delta^{4,5}$ linkage¹⁷ (Fig. 1D).

Other Hydroxyl Groups in the Genins

All cardio-active genins possess a hydroxyl group at C 3. This is usually arranged in the beta position, and, in fact, Chen observed that conversion of digitoxigenin to 3-epidigitoxigenin and tanghinigenin to 3-epi-tanghinigenin results in complete loss of activity.⁸ This is somewhat surprising, in view of the fact that the genin of the glycoside urezin appears to be 3-epi-uzarinigenin (Fig. 3D), and this glycoside is slightly more toxic than uzarin.⁸ Also it has been reported⁸ that 5-anhydroperiplogenone (Fig. 4A) has a digitalis-like action, and that 3-scillarenone also possesses activity.¹⁷ It is, of course, possible that in these molecules the 3-keto group is reduced to 3-beta OH by the animal—a common reaction in the metabolism of steroidal hormones. Other nuclear substituted hydroxyl groups are found at C 1 (ouabagenin), C 5 (strophanthidin), C 11 (sarmentogenin), C 12 (digitoxigenin) and C 16 (gitoxigenin). Whilst having some modifying action, these nuclear hydroxyl groups do not affect the toxicity to any marked extent, so that they cannot be regarded as essential for activity. The C 10 methyl group may be oxidised to $-\text{CH}_2\text{OH}$ (strophanthidinol) or to $-\text{CHO}$ (strophanthidin) without much effect on toxicity. Oxidation to $-\text{COOH}$ (strophanthidinic acid), however, does result in a significant loss of toxicity (Fig. 4B).

Influence of the Sugar Residues on Toxicity

A detailed study of the influence of the sugars on toxicity has been made by Chen and co-workers.^{2,3} From this work it appears that in general the genins are less toxic than the corresponding glycosides, although the reverse is seen in sarverogenin and its glycosides intermedioside and pantroside, as well as in corotoxigenin and its glycoside milloside. The naturally occurring sugars do not necessarily produce the most toxic glycosides, as their substitution by glucose often results in increased toxicity. There is some indication that the toxicity decreases with the addition of each monosaccharide unit, but this does not always follow, since cheiroside A is more toxic

than desglucocheiroside A.³ Acetylation of the sugars produces variable results in toxicity, and it is difficult to make useful deductions. It has been observed by several workers,^{18,19} that the sugar residues of the glycosides diminish their effect upon the central nervous system. Digitoxigenin, for example, produces convulsions in cats and frogs, whereas corresponding doses of the glycosides fail to produce similar effects. It would be interesting to determine whether the loss of the sugar has any significant effect upon the surface activity of the molecule, and whether this is related to the central nervous action.

It is well known that glycosides having 2-desoxy sugars linked to the genin are more easily hydrolysed chemically than those with normal sugars. This does not, however, have much bearing on toxicity. Rhamnose (a 2-oxy sugar) does give glycosides of high toxicity, e.g., Convallotoxin, which is the most toxic glycoside (L.D. cat 0.079 mg/Kg)—but some rhamnosides are not as toxic as glycosides possessing the same genin combined with 2-desoxy sugars. Thus convallside (strophanthidin + rhamnose + glucose) is less toxic than k-strophanthin (strophanthidin + cymarose + glucose).

FIGURE III

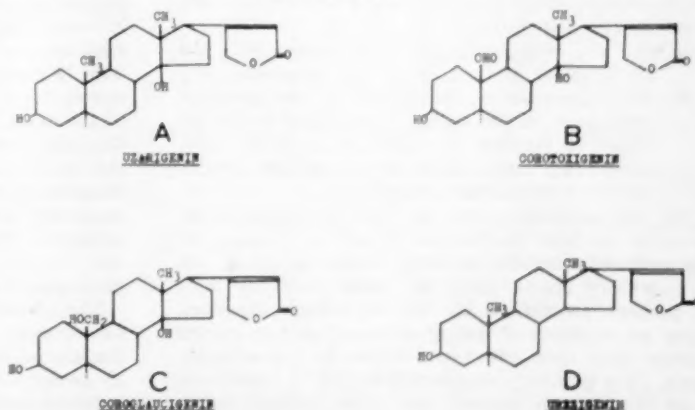
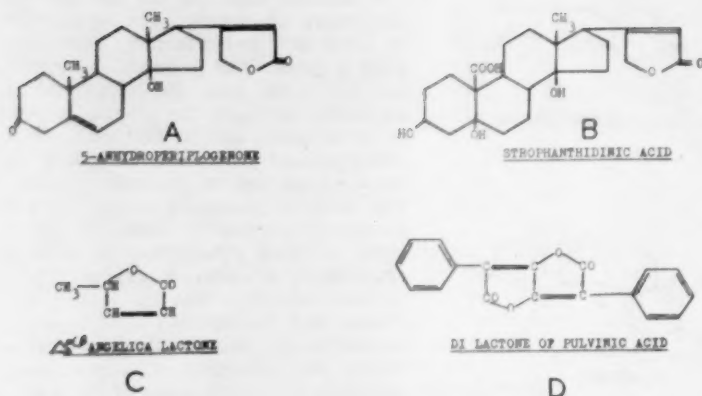


FIGURE IV



Embryonic-Chick Heart Studies

The toxicity of the cardiac glycosides on the embryonic chick heart has been used by Lehman²³ to correlate activity and molecular structure. It is apparent from this survey that the order of toxicity of various glycosides is, as might be expected from the nature of the test material, different from cat toxicity. Thus ouabain is only one-eighth as toxic as digitoxin when measured on the embryonic chick heart, whereas it is twice as potent in terms of cat toxicity. The genins are definitely less toxic than the corresponding glycoside, but the number of substances tested was limited, and it is not possible to generalise. It was found, however, that the alpha and beta angelica lactones (Fig. 4C) were only 1/800 to 1/500 times as toxic as digitoxin, indicating quite clearly that the lactone ring alone is of little importance. This evidence supported the conclusions of Mendez,²⁴ who demonstrated that activity of these lactones previously reported²⁵ was due to peroxides present in the test solution.

Significance of Molecular Variations

The evaluation of the activity of cardiac glycosides by toxicity data and the conclusions drawn therefrom on the relationship between structure and activity are based on two assumptions:—

- (a) That the cardiotoxicity of these molecules is but an extension of their cardiostimulant properties, and
- (b) That processes of metabolism do not produce alterations in the molecule, resulting in an increase or decrease in toxicity or activity. This could apply especially to testing methods involving the use of intact animals.

The first assumption that the same mechanism is responsible for both the therapeutic and toxic actions of the cardiac glycosides is fairly widely accepted. In fact, toxicity results have invariably been the basis of potency estimations for clinical usage. However, there are methods of testing cardiac glycosides which depend upon their effect on a failing or hypodynamic heart. The papillary muscle preparation of Cattell and Gold is one such method, and these authors²⁶ found

that a similar ratio existed between the therapeutic and toxic doses in a number of clinically important glycosides. White, Bedford and Salter,²⁴ again using papillary muscle, obtained significant correlation between the cat lethal dose and inotropic response. Giarman²⁵ measured the cardiostimulant effect of several glycosides and some naturally occurring lactones not containing the steroidal nucleus, using frog hearts made hypodynamic by perfusion with low calcium Ringer. He considered that the basic mechanism of cardio-toxicity and cardio-activity was an expression of varying degrees of the same chain of chemical events. Farah and Maresh,²⁶ using heart lung preparations of the dog, allowed to fail spontaneously or depressed with pentobarbitone, found that five glycosides could be assayed in the same descending order of potency

when evaluated according to the "lethal" dose, "therapeutic" dose or "toxic" dose. Bryan and Waldon,²⁷ using the embryonic chick heart, obtained a good correlation between the therapeutic doses of a number of glycosides and the embryonic chick heart L.D. 50. Wollenberger and Karsh²⁸ measured the effect of cardiac glycosides in the contraction of guinea pig hearts inhibited by dinitrophenol, and stated that the cardiac glycosides appeared to attack the same cellular enzyme systems in the therapeutic and toxic phases of their action.

However, even if it is conceded that the toxicity of these molecules, which are known as cardiac glycosides, is an extension of their cardiostimulant effect, it does not mean that other substances may be found which have a higher therapeutic index (ratio of median irregularity dose to median inotropic dose). Such substances could be regarded as having a more pronounced cardiostimulant effect. The cardiac glycosides are not the only substances which have a positive inotropic effect. The veratrine and erythrophleum alkaloids do not resemble the cardiac glycosides in their chemical structure, yet they have cardiostimulant effects. The dilactone of pulvic acid (Fig. 4D) was reported to produce a positive inotropic effect in the same order of concentration as that necessary for the cardiac glycosides ouabain and digitoxin.²⁹ Loynes and Gowdy³⁰ claimed a significant augmentation of hypodynamic frog hearts with 15 steroidal substances, including cholesterol, ergosterol, calciferol and testosterone. The reconciliation of the apparent specificity of the molecules of the cardiac glycosides with these observations makes it necessary to postulate either different methods of action or different points of attack on the cell for these different molecular types. However, this is not the present problem. What we wish to determine is which groupings or structures in the cardiac glycoside molecule make important contributions to activity.

The second assumption that metabolic processes do not seriously interfere with the molecular structure of the glycosides needs critical examination. If stress is to be placed on slight structural alterations in the molecule before injection, then it is surely necessary

to examine what happens to the molecule immediately after injection. Work in this department during the past three years²⁰ has shown that digoxin is excreted in the urine of rats in the free form and as a cardioactive metabolite, which is a conjugate of digitoxigenin. The nature of the conjugate is unknown, but it represents about one-third of the total urinary cardioactive material. Lanatoside C also produces the same metabolite as digoxin in the urine of rats, as well as free digoxin and unchanged lanatoside C. Digitoxin is excreted in rat urine mainly as a metabolite, which appears to be a conjugate not of digitoxigenin but of a molecule derived from digitoxigenin, possibly by the addition of a hydroxyl group. Ouabain also produces a metabolite as well as the original glycoside in the urine. Recently we have shown that the urinary metabolites of digoxin and digitoxin are produced in the rat almost immediately after injection. With digoxin, for example, a considerable amount of the metabolite found in the urine appears in the blood and liver less than five minutes after injection. The metabolite could also be detected in the heart and in the kidney.

It is, of course, to be expected that metabolic processes will attempt to destroy these foreign molecules as rapidly as possible, but the toxicity of the glycoside is possibly not altered very much. The rapidity of these changes, however, does make it rather impossible to evaluate those alterations in the molecule which do not have very profound effects upon toxicity or activity. The significance of the different sugars would be rather difficult to assess if they are removed from the glycoside by the animal as quickly as they are in the case of digitoxin. It may be that it is necessary for the molecule to be altered to exert its full cardiotonic activity, but until more work is done along these lines it is fruitless to speculate.

All methods of testing cardiac glycosides have some deficiency which tends to make the assessment of structural features in the molecule difficult. The cat toxicity work, although the most complete, does, as we have seen, reveal many important anomalies, and the significance of some of the results obtained in experiments devised to reveal the cardiotonic properties of the glycosides is open to question. More elegant pharmacological methods are continually being devised, and the use of micro electrodes in measuring the action of cardiac glycosides on isolated heart muscle fibres may prove to be a very useful approach. Cardiac glycosides have been shown to exert a characteristic effect on the membrane action potential of heart muscle. Woodbury and Hecht,²¹ using microelectrodes inserted into individual muscle fibres of the frog heart, found that digitoxin reduced the magnitude of the action potential and membrane reversal of the contracting muscle fibre. Toxic doses brought about extreme shortening of repolarisation, although they did not alter the duration of depolarisation. These effects are characteristic, and if they can be truly related to the cardiotonic properties of the glycosides, this method should be of great assistance in locating the actual pharmacodynamic groups of the cardiac genins. The method is a direct one on the muscle fibres themselves, and is

independent of any metabolic changes which may occur in the intact animal. It also has the advantage of rapidity and not requiring the development of hypodynamic conditions in the heart.

What is needed, we feel, is a fresh approach to this problem. Reliance should not be placed upon one method of pharmacological testing. Conclusions from changes in molecular structure produced in one glycoside or its genin should be drawn only after the substance has been tested on several animal preparations involving measurement of both cardiotoxic and cardiotonic effects. Attempts must also be made to use knowledge of the changes incurred in the molecule during metabolism. The problem is to decide which groupings or molecular arrangements are responsible for cardiac activity by altering the molecule at critical points, one at a time if possible, and testing the resulting substances by a number of different pharmacological techniques. The relatively slight variations in activity observed in glycosides differing only in minor details are not really important in solving the fundamental problem.

We also think that insufficient attention has been paid in the past to the changes produced in physical properties on the molecules by hydrolysis to genin or by alteration to the characteristic groupings. A study of changes in surface tensions and partition coefficients, and of the possibilities of hydrogen bonding, could perhaps help to explain some of the perplexing anomalies. It is hoped that effective co-operation between chemists and pharmacologists in this border-line project may yield some useful information.

References

1. Chen, K. K., *Ann. Review Physiol.*, **7**, 677 (1945).
2. Chen, K. K., Henderson, F. G., and Anderson, R. C.; *J. Pharmacol. Exper. Therap.*, **103**, 420 (1951).
3. Chen, K. K., and Henderson, F. G.; *Ibid*, **111**, 365 (1954).
4. Heusser, H.; *Digitalis Aglycones and Glycosides: Progress in the Chemistry of Natural Products*; Springer, Vienna (1950).
5. Shoppee, C., and Shoppee, E.; *Chemistry of Carbon Compounds*, Vol. 2B, Rodd; Elsevier, Amsterdam (1953).
6. Chen, K. K., Chen, A. L., and Anderson, R. C.; *J. Amer. Pharm. Assoc.*, **25**, 579 (1936).
7. Chen, K. K., and Elderfield, R. C.; *J. Pharmacol. & Exper. Therap.*, **70**, 338 (1940).
8. Chen, K. K., Elderfield, R. C.; *Ibid*, **76**, 81 (1942).
9. Chen, K. K., Elderfield, R. C., Uhle, F. C., and Fried, J.; *Ibid*, **77**, 401 (1943).
10. Chen, K. K., Steldt, F. A., Fried, J., and Elderfield; *Ibid*, **74**, 381 (1942).
11. Jacobs, W., and Hoffmann, A.; *J. Biol. Chem.*, **74**, 787 (1927).
12. Jacobs, W., and Elderfield, R. C.; *Ibid*, **88**, 519 (1930).
13. Stoll, A., Pereira, A., and Renz, J.; *Helv. Chim. Acta*, **32**, 293 (1949).
14. Tschesche, R., and Snatzke, G.; *Berichte*, **88**, 511 (1953).
15. Stoll, A., et al.; *Helv. Chim. Acta*, **32**, 293 (1949).
16. Hunger, A., and Reichstein, T.; *Ibid*, **35**, 68 (1952).
17. Stoll, A., Renz, J., and Brock; *Helv. Chim. Acta*, **34**, 2301 (1951).
18. Straub, W.; *Biochem. Z.*, **74**, 132 (1916).
19. Chen, K. K., Robbins, E. B., and Worth, H.; *J. Amer. Pharm. Assoc.*, **27**, 189 (1938).
20. Lehman, R. A.; *Proc. Soc. Exper. Biol. Med.*, **63**, 372 (1946).

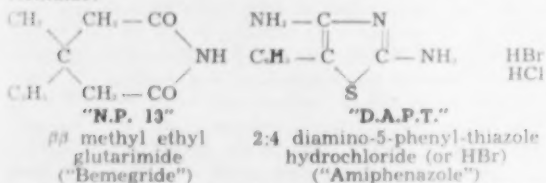
21. Mendez, R.; *J. Pharm. Exper. Therap.*, **61**, 151 (1944).
22. Krayner, O., Mendez, R., de Espanes, E. M., and Linstead, R. P.; *Ibid.*, **74**, 372 (1942).
23. Cattell, M., and Gold, H.; *Ibid.*, **71**, 114 (1941).
24. White, W. F., Belford, J., and Salter, W. T.; *Ibid.*, **92**, 443 (1948).
25. Giarman; *Ibid.*, **96**, 119 (1949).
26. Farah, A., Maresh, G.; *Ibid.*, **92**, 33 (1948).
27. Bryan, G. H., and Waldon, C. H.; *J. Amer. Pharm. Assoc. Sci. Ed.*, **41**, 497 (1951).

28. Wollenberger, A., and Karsh, M. L.; *J. Pharmacol. Exper. Therap.*, **105**, 477 (1952).
29. Loynes, J. S., and Gowdy, C. W.; *Can. J. Med. Sci.*, **30**, 325 (1952).
30. Shephard, E. E., Thorp, R. H., and Wright, S. E.; *J. Pharmacol. Exper. Therap.*, **112**, 133 (1954).
31. Brown, B. T., Ranger, D., and Wright, S. E.; *Ibid.*, **113**, 353 (1955).
32. Woodbury, L. A., and Hecht, H. H.; *Circulation*, **6**, 172 (1952).

The Barbiturate Antagonist "N.P. 13" and the Morphine Antagonist "D.A.P.T."

By P. C. Somers

The two drugs N.P. 13 and D.A.P.T. have been recently developed in the Pharmacology Department of the Melbourne University, and are new additions to the Australian Pharmaceutical Formulary. They have the formulae:



As the two are referred to as N.P.13 and D.A.P.T. in the medical literature, I shall use these names in my talk.

N.P.13 is active as a barbiturate antagonist, and D.A.P.T. as a non-specific respiratory stimulant and morphine antagonist.

The Barbiturate Antagonist "N.P.13"

During the past 10 years the increasing popularity of barbiturates as suicidal agents has created a world-wide problem. There are at present two methods of treatment of acute barbiturate intoxication, which differ regarding the concomitant use of central analeptics such as leptazol or picrotoxin. Though thorough and intelligent medical care is the basis of both methods, the one involves treatment as for a long-lasting anaesthesia and uses no central analeptics, while the other depends on the use of central analeptics. Animal experiments and clinical data seem to support the contentions of those who stress the dangers involved in using central analeptics—convulsions, secondary depression.

However, the alternative method has also been criticised on the grounds that it is uncertain, in cases of deep coma, and time-consuming, where coma is prolonged.

The new method of treatment with N.P.13 and D.A.P.T. allows such a patient to be quickly brought (c.a. 2 hours) to a state of light anaesthesia, from which spontaneous recovery to full consciousness usually occurs within 8 hours. It thus removes immediate risk to the patient's life and promotes a quicker recovery.

D.A.P.T. is itself only a weak barbiturate antagonist, but a good synergist to N.P.13 and an excellent respiratory stimulant. It greatly reduces the risk of toxic manifestations, which may sometimes occur when N.P.13 is given alone.

N.P.13 differs from the central analeptics in that it appears to exert a direct antagonism to the barbiturate.

This direct antagonism by therapeutic doses of N.P.13 is indicated by the fact that rabbits can be put to sleep and awakened almost at will by alternate intravenous injections of thiopentone and N.P.13. Similar experiments with the central analeptics indicate that they are of little value in the treatment of deep barbiturate coma. Furthermore, it has been found that while none of the central analeptics produce any change in the electroencephalograms (brain wave patterns) of dogs deeply anaesthetised with amylal, administration of N.P.13 restores the pattern to normal.

Thorough animal investigations have indicated that both N.P.13 and D.A.P.T. have a high therapeutic index, and no toxic or side effects have been observed with the suggested method of treatment.

Present evidence suggests that N.P.13 is the best substance now available for the management of barbiturate coma, and in combination with D.A.P.T. will allow a quick, safe recovery without risk of complications which may follow treatment with any of the central analeptics. The method has been successfully used many times in Australia in the past two years, and more recently overseas.

N.P.13 may also be of value in assisting rapid recovery from routine barbiturate anaesthesia, and in any emergencies which might arise, applications which are under investigation.

With regard to the physical properties of these two drugs, N.P.13 is a colourless crystalline compound (m.p. 125° C.), soluble to about 0.5% in water. It is used clinically as a sterile 0.5% solution in physiological saline—in which it is perfectly stable.

D.A.P.T. is a colourless crystalline compound (m.p. 260° C.), soluble to about 4% in water. It hydrolyses fairly readily in aqueous solution, and is therefore supplied as a sterile powder, to be dissolved in physiological saline as required for use.

The Morphine Antagonist "D.A.P.T."

If the initial promise of D.A.P.T. as a morphine antagonist is confirmed by further clinical experience, its use with morphine may well become standard procedure, replacing straight morphine or other morphine combinations.

The use of morphine in large doses for the relief of prolonged and severe pain is hindered by the risk of producing dangerous respiratory depression.

Animal experiments and subsequent clinical trials have shown that D.A.P.T. has a marked and lasting antagonism to the respiratory depressant effect of morphine, while having little or no effect on the analgesic properties of morphine. The clinical use of large doses

of morphine, as in the treatment of terminal carcinoma, is thus rendered a safe procedure.

Animal and clinical results indicate that:

- (i) D.A.P.T. is a specific antagonist to morphine—it relieves the respiratory depression caused by excessive doses of morphine, heroin and the synthetic analgesics pethidine and methadone. It appears also to antagonise vomiting and constipation often associated with morphine.
- (ii) It is a non-specific respiratory stimulant—hence its use with N.P.13 in treatment of barbiturate intoxication.
- (iii) It has a high therapeutic index (c.a. 10).
- (iv) Clinical results to date have given no signs of the development of tolerance or addiction. D.A.P.T. may prevent or delay the onset of tolerance.
- (v) There are no pharmacological contra-indications to the use with D.A.P.T. of hyoscine, atropine, chlorpromazine, barbiturates.

Present practice in using morphine for the relief of pain is to give small doses at frequent intervals. As larger doses cannot be given without producing dangerous side effects, this treatment is only partially effective in producing relief from severe pain. Where D.A.P.T. is used, large doses of morphine, adequate to give satisfactory analgesia, may be safely employed. In the initial stages of treatment, D.A.P.T. is given by intramuscular injection (15 mgm.), and after the first few days is administered orally (tablet, 20 mgm.) at the same time as the morphine injection. The method has been used quite widely in Melbourne Hospitals (Shaw & Shulman), and considerable interest is being shown elsewhere and overseas.

Finally, a brief comparison of the action of D.A.P.T. with that of "nalorphine" will indicate the relative value of the former. Nalorphine (N-allyl nor-morphine) is about the only substance well known clinically to oppose the respiratory depressant effect of morphine. However, no satisfactory clinical combination of morphine and nalorphine has been found which does not produce some toxic effect in adequate therapeutic doses.

Although nalorphine by itself in therapeutic doses is not free from undesirable side reactions, D.A.P.T. at five times the therapeutic dose is almost without side reactions.

Nalorphine produces withdrawal symptoms in patients who have received only a few doses of morphine, something which has not been observed with D.A.P.T.

Nalorphine has been found to antagonise the analgesic action of morphine to some extent—D.A.P.T. is found to offer no such antagonism.

D.A.P.T. would thus appear to be much superior to nalorphine as a morphine antagonist.

It is considered (Shaw & Shulman) that the removal of the risk with D.A.P.T. respiratory depression due to morphine should allow more extensive use of morphine in such fields as coronary occlusion and obstetrics.

References

- Shaw, F. H., and Bentley, G.: *Nature*, **169**, 712 (1952).
Shaw, F. H., et al.: *Nature*, **174**, 402 (1954).
Shulman, A., et al.: *B.M.J.*, 1238 (1955).
Harris, T. A. B.: *Lancet*, 181 (1955).
Shaw, F. H., and Shulman, A.: *B.M.J.*, 1367 (1955).
(Nicholas Pty. Ltd., Melbourne.)

SCIENCE SECTION

ACETYLCHOLINE

A Surface Hydrolysis Theory of Chemical Mediation at the Neuro-Muscular Junction

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Introduction.—Otto Loewi, in his introductory address to the Symposium on Neurohumoral Transmission held by the Physiological Society of Philadelphia in September, 1953, made the remark that "Everybody should feel free to present his individual observations, criticisms, concepts, interpretations, hypotheses." Acting on the advice of such a renowned worker in this particular field, it is proposed to put forward an hypothesis, or interpretation of the accumulated data, concerning the mode of action of acetylcholine in translating motor-nerve impulses into voluntary-muscle activity at the neuro-muscular junction.

The hypothesis varies in some details from the currently accepted views, particularly with regard to the location and nature of cholinesterase, and recourse will be had to some physico-chemical "explanations" of the hydrolysis of esters.

This approach is lent some support by the remarks of Sir Henry Dale, at the Symposium introduced by Otto Loewi, when he said: "We shall be having recourse, no doubt, to physical chemistry in our search for a more radical solution." Further stimulation to make some attempt at an explanation of the transmission process is provided by the challenging statement made by Loewi to the effect that "We know much less about the mechanism than about the extent of the chemical transmission."

The treatment given here to the subject also differs from that of Rosenbluth who, in his book *The Trans-*

mission of Nerve Impulses at Neuro-effector Junctions and Peripheral Synapses, writes that "No mention is made of the mechanism whereby the mediator activates the postsynaptic elements. This omission is made for purposes of simplification; it does not modify significantly the applicability or generality of the theory, . . ."

This paper may be criticised on the grounds that it, in turn, dismisses all consideration of the theories of electrical transmission of the nerve impulse at the neuro-muscular junction, but this has been done because the evidence does seem to weigh rather heavily in favour of the chemical mediator—acetylcholine (ACh).

Historical.—Although ACh was synthesised by Baeyer, in 1867, its role as the chemical mediator in the transmission of nerve impulses was not known with certainty until demonstrated by the classical experiments of Loewi, in 1921.

Dale, in 1914, had observed the similarity of effects produced by ACh and stimulation of nerves belonging to the parasympathetic nervous system, but it remained for Dale and Feldberg, in 1934, to obtain direct experimental evidence that striated muscles were activated by the release of ACh from the terminations of the motor nerves.

Dale further postulated the presence of an enzyme to destroy ACh in order to account for the intermittent nature of transmission. The fact that ACh is subject to inactivation by hydrolysis to choline has been nicely demonstrated by the histochemical technique developed by Koelle—*J. Pharm. Exp. Therap.* **103**, 153-71 (1951), and by Couteaux—*Arch. Int. Physiol.* **59**, 526-37 (1951).

Mode of Action.—Currently expressed views of the mode of action of ACh are that there is a transient fixation of the mediator molecule to appropriate "centres" on the receptor-surface of the cell to be stimulated. This fixation occurs because of attraction

between electrically-charged "centres" on the receptor-surface and "centres" in the mediator molecule, which are of opposite sign—negative and positive.

The fixation causes depolarisation of the receptor-surface and thus elicits typical effector-cell activity.

This point of view has been developed largely by the work of Nachmansohn, Wilson, and Bergmann—*J. Biol. Chem.*, **186**, 693 (1950).

Structure Activity Relationships.—Attempts have been made by Pfeiffer—*Science*, **107**, 94 (1948)—to discover stereochemical similarities in the various compounds that elicit similar responses to those produced by ACh.

While very many of the physiologically active compounds conform to the general structural pattern regarded as necessary to fit into the receptor-surface "centres," there are some compounds that do not meet the requirements put forward by Pfeiffer. For this reason, Ing—*Science*, **109**, 264 (1949)—put forward the suggestion that a "five-atom rule," which postulates that the active "centres" of the drug molecule must be on the two atoms in a chain which are separated by three other atoms, should be adopted.

Both of these workers seem to envisage the drug molecules as having a rigid structure that will allow them to fit closely to the fixed "centres" of the receptor-surface of either the effector-cell or the enzyme (cholinesterase).

This view would seem to be in accordance with the lock-and-key concept of the relationship between enzyme and substrate.

Dynamic Relationships.—As a possible alternative to the static structures of the lock-and-key theory, it is suggested that there is a dynamic relationship between the structures of drug and receptor-surface.

Examination of a model of ACh, as opposed to the totally inadequate representation of the structure when drawn on paper, reveals many possibilities of configuration that leave little room for belief in fixed distances between the "cationic-head" and the "ester-tail" of the molecule.

Furthermore, if the receptor-surface be in the nature of a protein, there is a distinct possibility that it would be plastic enough to conform to the pattern required by the structure of the drug molecule. In order to explain the "plasticity" of the surface it is necessary to consider the chemical nature of the receptor-surface "centres."

Nature of Receptor-Surface "Centres."—If the active "centres" of the receptor-surface are considered to be made up of positively- and negatively-charged groups, then the structures most likely to contribute to such a pattern of charged "centres" (from a consideration of the sub-molecular structure of proteins) would seem to be the amino- and carboxyl-groups, which occur frequently as "free" groups on the surface. These groups are capable of existing in different electrical states, according to the pH value of the system in which they occur.

In acid solution, the ionization of carboxyl-groups would be repressed, and the formation of "ammonium"-ions by the amino-groups would be favoured, thus giving the surface an overall positive charge.

In alkaline solution the amino-groups would not carry a charge, but the carboxyl-groups would be ionized to give an overall negative charge to the surface.

The intermediate stage, between the two preceding limiting-states, would be that giving a neutral reaction to the protein surface. The neutral reaction probably corresponds to the iso-electric point where the numbers of positive and negative charges are equal.

Even though it might be considered that the protein "back-bone" carrying the active "centres" could be a rigid structure (which does not seem essential when consideration is given to the extreme "plasticity" of voluntary muscle fibres), this still does not preclude the possibility of dynamic alterations within the func-

tional groups themselves—particularly in the "carboxylate"-ion.

Resonance and Rotation.—Due to resonance, the negative charge of the carboxylate-ion may reside on either of the oxygen atoms depending upon the position of an external positive charge. Furthermore, it could be expected that the external positive charge could induce rotation of the carboxylate-ion about the C—C bond, in a plane "parallel" to the protein surface; a surface that, on the atomic scale, must be rather rough than planar.

Such changes in orientation of the negatively-charged oxygen would allow of variation in its distance from a supposedly fixed positive charge on the surface; ranging from a minimum to a maximum that differed by something like 2 Angstrom units.

Neither does the presence of a positively-charged amino-group on the surface necessarily imply that the positive charge is absolutely fixed in one position. The direction in which its attraction is exerted will be decided by the direction of approach of an external negative charge.

Thus, the actual inter-charge distance assumed by the receptor-surface "centres" would be determined largely by the restraining influence of an approaching charged molecule such as ACh. The flexibility of the inter-charge distance on the receptor-surface, as postulated above, could account for the fact that many structurally-different molecules will fit on the receptor-surface "centres."

The lock-and-key concept could then be modified so that the surface played the role of a master-lock that could be opened by a number of keys, differing only slightly in design. This deliberate inversion of the "master-key for many locks" relationship is somewhat clumsy, but may serve as a model "not too remote for pictorial service," to quote Sir Charles Sherrington—*Man on His Nature*, p. 223 (Cambridge, 1946).

Nature of Drug Molecules.—Different types of molecule are capable of combining (at least temporarily) with the receptor-surface groups. Such molecules may be classified, broadly, as follows:

- a. **Uni-Polar**, carrying only one charge, either positive or negative, e.g., tetramethylammonium ion, bearing a positive charge.
- b. **Bi-Polar**, carrying two charges, opposite in sign, i.e., both positive and negative such as in ACh. (The Bi-Polar structure is not to be confused with the Dipole, which occurs within the actual ester group itself.)
- c. **Twin-Polar**, carrying two charges, both alike in sign, which may be either positive or negative; positive in the cases of tubocurarine chloride and decamethonium bromide, and negative in the case of TEPP.

Muscarine, which has similar effects to ACh on gland cells and smooth muscle, has the possibility of existing as a bi-polar structure, while both eserine- and neostigmine-salts, which potentiate the action of ACh (by inhibition of cholinesterase, it is claimed) also possess the typical bi-polar groups found in ACh.

ACh antagonists such as atropine (which contains a tertiary N-atom and an ester group—its salts thus having some similarity to ACh, and tubocurarine and decamethonium halides, both of which are twin-polar compounds, do not seem to conform to any rigid stereochemical pattern. ACh protagonists, viz., the phosphate anti-cholinesterases with alkyl- and quaternary-aminophenol-substituents, also show considerable diversity of structure, and are either bi-polar or twin-polar in nature.

Attempts to find stereochemical relationships with pharmacological activity have not always been entirely successful. For this reason, it is suggested that the activity of a compound depends more upon the distribution of the "centres" on the receptor-surface with which its molecules combine, than with the specific

chemical nature of the compound itself. Thus, it is claimed here, tubocurarine chloride will combine with an entirely different pattern of "centres" on the receptor-surface than will succinylcholine or hexamethonium bromide.

A study of the various combination patterns would, in all probability, aid in the understanding of the diverse effects produced by the various compounds.

Activation and Inhibition.—The receptor-surface which is capable of reacting with numerous molecules could be expected to have a fairly definite repetitive pattern of charged "centres," so that it would be capable of acquiring an over-layer, of mono-molecular thickness, of either activator or inhibitor molecules.

If the trigger-mechanism of the receptor-surface can be set off by bi-polar compounds of appropriate dimensions, and then the trigger-mechanism re-set by discharge, from the surface, of the activator which has been altered by disruption of its internal structure, then it is reasonable to expect that the trigger-mechanism could be jammed by prior combination of the surface with twin-polar compounds such as tubocurarine, that would blanket it off from the effect of bi-polar activator molecules, such as ACh.

In the case of ACh, the trigger-mechanism is set off to initiate gland-cell activity or muscle-fibre contraction. The ACh is then hydrolysed to inactive choline and acetic acid, and this breakdown of the molecule allows for the re-setting of the trigger-mechanism. The process is envisaged as being somewhat analogous to the firing of a gun, when it is necessary for the empty shell to be ejected before a new bullet can enter the breech to be fired by the newly re-set trigger.

If the mechanism becomes jammed, by the access of molecules that cannot be broken down and removed from the surface, as would be the case with twin-polar compounds, then the normally repetitive process is brought to a standstill.

The gun cannot fire with a cartridge case jammed in the breech; the muscle-fibre cannot contract when its receptor-surface is blocked by molecules that cannot be dislodged by the normal physiological processes.

The **NORMAL** physiological responses of muscle-fibre contraction and gland-cell activity are invariably accompanied by the breakdown of ACh to choline and acetic acid. The object of this paper is to propose a mechanism whereby the combination of ACh with the receptor-surface, followed by hydrolysis of the ACh, could account for the initiation of the muscle-fibre response and the re-polarization of the receptor-surface.

Enzymes of the Neuro-Muscular Junction.—Sir Henry Dale wrote in *Endeavour*, (July 1953), p. 120: "I guessed, rightly as later evidence showed, that there must be an esterase in the body, to the hydrolytic action of which this choline ester was extremely susceptible."

A survey of the literature indicates the acceptance, by many workers, of not only cholinesterase to hydrolyse ACh, but also choline acetylase to synthesise ACh, at the neuro-muscular junction.

It has even been suggested that ACh itself might be the co-enzyme of a specific (but unidentified) enzyme regulating membrane permeability and polarity. Discounting this latter suggestion for the present, current theory would still make the neuro-muscular junction the scene of very complex chemical activity. The presence of the two former enzymes would call for a very nicely adjusted and co-ordinated mechanism at the junction to allow the enzymes to operate in proper chronological sequence in the limited time necessary for each separate nerve-impulse to pass across the junction during a repetitive volley of impulses. Furthermore, it would seem to call for some sort of inactivation of the cholinesterase until the ACh had combined with the receptor-surface. Otherwise, if the enzyme has the capacity to remove ACh from the receptor-surface and then hydrolyse it, there is the possibility that the enzyme might have such an attrac-

tion for the ACh that it would prevent it from reaching the receptor-surface.

The theory that the junction is flooded with ACh, upon the arrival of a nerve-impulse, so that the enzyme is kept busy with the excess over that necessary to combine with the receptor-surface, does not seem to provide an entirely happy and satisfactory explanation of the phenomenon.

The problem would be simplified, to some extent, if the cholinesterase could be regarded as being structurally integrated with the receptor-surface. This is not beyond the bounds of possibility, and the implications of hydrolysis at the receptor-surface will be discussed subsequently.

One feature of transmission at the neuro-muscular junction, that does not seem to have received adequate attention, is the mechanism whereby ACh is supposed to be hydrolysed by cholinesterase. It would appear necessary to have an adequate explanation of this process to help complete the picture of the events occurring at the junction, if the current theory is to be adhered to, but not if the idea of cholinesterase be discarded.

Proposed Theory of Hydrolysis at the Receptor-Surface.—The process may be considered to consist of a number of stages, following one another in rapid succession, or even occurring simultaneously:

1. The bi-polar ACh becomes attached to the "centres" of the receptor-surface; the ester moiety to an ammonium-group, and the cationic head to a carboxyl-group.
2. The ester-amino linkage induces a positive charge on the carbonyl carbon atom of the ester moiety. A proton is liberated from the carboxyl-group of the surface, and passes through the membrane to the interior of the muscle-fibre.
3. A polarized water molecule becomes attached to the positive carbonyl carbon atom through the negative oxygen atom of the water molecule.
4. The ester linkage ruptures between the carbonyl carbon atom and the alkoxy oxygen, thus effecting hydrolysis.
5. The positively charged $\text{CH}_3\text{COOH}_2^+$ separates from the surface leaving an uncharged amino-group.
6. The $\text{CH}_3\text{COOH}_2^+$ group loses a proton and forms acetic acid.
7. The liberated proton re-combines with the surface amino-group to form an ammonium ion.
8. The acetic acid ionizes to form a proton and an acetate ion.
9. The acetate ion combines with the choline to form choline acetate, because the acetate ion is a stronger base than the surface carboxylate-group. The choline acetate can no longer remain attached to the receptor-surface.
10. The proton, from stage 8, combines with the surface carboxylate-group to form an un-ionized carboxyl-group.

Electrical Changes at Receptor Surface.—Since the receptor-surface, in the resting state, is polarized or positively charged, it is suggested that the carboxyl-groups are un-ionized and the amino-groups exist as positively charged ammonium-groups.

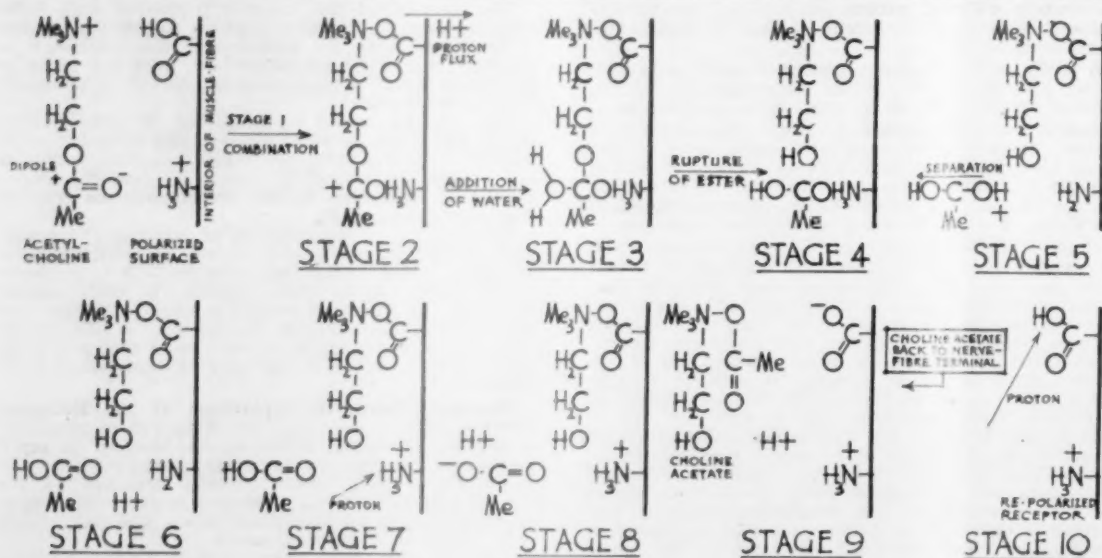
This allows for the attachment of the negatively charged oxygen of the ester moiety of ACh. Subsequent separation of the $\text{CH}_3\text{COOH}_2^+$ from the surface removes the positive charge from the amino group.

The approach of the cationic head of ACh to the surface causes the carboxyl-group to ionize, forming the negatively charged carboxylate-group. (Compare the effect of cations in liberating hydrogen ions from cation-exchange resins.)

The surface which was positively charged has now become negatively charged, thus accounting for the depolarization of the receptor-surface.

The surface becomes re-polarized by the acquisition of two protons as described in stages 7 and 10 above,

STAGES IN THE REACTION OF ACETYLCHOLINE WITH RECEPTOR-SURFACE



after the ester has been hydrolysed and discharged from the surface as choline acetate.

The protons, liberated by the ionization of the surface carboxyl-groups, are driven into the interior of the muscle-fibre by the repulsion effect of the cationic head of ACh, thus increasing the extent of the reversal of polarity between the receptor-surface and the interior of the muscle-fibre.

The proposed role of protons in initiating muscle-fibre contraction will be discussed subsequently. For the present, something further must be said regarding cholinesterase.

Present Evidence for Cholinesterase.—The histochemical techniques, developed by Koelle and Couteaux to show the distribution of cholinesterase, rely upon the chemical reactions produced by the hydrolysis products of acetylthiocholine.

Thus, the techniques simply prove that hydrolysis has occurred, and do not demonstrate conclusively the presence of a separate entity—cholinesterase—except by inference, that an enzyme must be present, because hydrolysis has occurred.

The surface-hydrolysis theory does not assign any role to the enzyme, cholinesterase. It does, however, provide for the hydrolysis of ACh as part of the mechanism of neuro-muscular transmission.

"True" and "Pseudo" Cholinesterases.—Paton, in a lecture to the British Postgraduate Medical Federation, University of London, said: "It is disappointing that we cannot judge cholinesterase concentrations in the recesses of the brain or the muscles from assays on readily accessible serum or blood cells, but it was rather optimistic to expect it." (*Lectures on the Scientific Basis of Medicine*, Vol. III, (1953-54), "Anticholinesterases," p. 117).

The discovery of "true" cholinesterase on the surface of erythrocytes, and the multitude of "pseudo" cholinesterases in the blood plasma of many different mammalian species has led to some interesting speculations upon their teleological significance. It has also led to a rather fruitless search for hypothetical biological substrates for the different enzymes.

The suggestion is made by the writer that substrates do not exist for all the pseudo cholinesterases, and

that they are purely fortuitous discoveries. The pseudo enzymes are, no doubt, protein in nature, and it is not remarkable that, amongst the species-specific proteins of mammalian blood plasmas, there should be some with the necessary surface groupings to allow for the attachment of ACh, butyrylcholine, benzoylcholine, etc., so that hydrolysis could be effected as outlined in the present surface-hydrolysis theory.

Ehrlich's dictum, that *corpora non agunt nisi fixata*, stated in an entirely different context, might be construed to mean, in the present connotation, that choline esters will not be hydrolysed unless fixed to a surface. The necessary fixation apparently does occur on the surface of the pseudo cholinesterases.

To have "recourse to a model—however crude" (Sherrington), the hydrolysis of ACh fixed to a surface might be compared with cutting through an iron bar, held firmly in a vice, with a hack-saw, while the hydrolysis of ACh not fixed to a surface would be comparable with sawing through an iron bar swinging freely on the end of a piece of string. (This simile does not apply to the hydrolysis of ACh in an alkaline medium.)

Initiation of Muscle-Fibre Contraction.—The process, initiating the series of chemical changes, which have for their main physical manifestation the contraction of voluntary muscle-fibres, is envisaged to be the sudden influx of a very large number of protons, corresponding to the number of ACh molecules reacting with the receptor-surface, into the interior of the muscle-fibre.

The series of chemical changes includes, *inter alia*, the hydrolysis of ATP to ADP and phosphoric acid. The protons could act as catalysts for this hydrolysis. The ionization of the newly-formed hydroxyl-groups of ADP and phosphoric acid would release two further protons, for each ATP molecule hydrolysed, in addition to the one already present as catalyst, thus making a total of three protons from each hydrolysis.

These three protons then act as catalysts for the hydrolysis of three more ATP molecules, leading to the release of nine protons. The next hydrolysis would lead to the release of 27 protons; the next, 81; the next 243, etc., etc.

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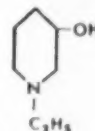
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Set out in stages, the proposed mechanism would appear as follows:

1. $\text{ATP} + \text{H}^+ + \text{H}_2\text{O} \rightarrow \text{ADP} + \text{H}_3\text{PO}_4 + \text{H}^+$
 $\text{ADP} \rightarrow \text{ADP}^- + \text{H}^+; \text{H}_3\text{PO}_4 \rightarrow \text{H}_2\text{PO}_4^- + \text{H}^+$
2. $3\text{ATP} + 3\text{H}^+ + 3\text{H}_2\text{O} \rightarrow 3\text{ADP} + 3\text{H}_3\text{PO}_4 + 3\text{H}^+$
 $3\text{ADP} \rightarrow 3\text{ADP}^- + 3\text{H}^+; 3\text{H}_3\text{PO}_4 \rightarrow 3\text{H}_2\text{PO}_4^- + 3\text{H}^+$
3. $9\text{ATP} + 9\text{H}^+ + 9\text{H}_2\text{O} \rightarrow 9\text{ADP} + 9\text{H}_3\text{PO}_4 + 9\text{H}^+$
 $9\text{ADP} \rightarrow 9\text{ADP}^- + 9\text{H}^+; 9\text{H}_3\text{PO}_4 \rightarrow 9\text{H}_2\text{PO}_4^- + 9\text{H}^+$
4. 27 molecules of ATP hydrolysed.
5. 81 molecules of ATP hydrolysed, etc., etc.

(Note that the dismutation of ADP to ATP and AMP has not been taken into consideration, as it does not radically alter the proposed hypothesis.)

Starting with many thousands of protons from the receptor-surface for the initial hydrolysis of ATP, the envisaged geometric progression, with a factor of three, could rapidly lead to many millions of liberated protons. The process would be auto-catalytic and would spread through the muscle-fibre very rapidly.

The immediate criticism of such a scheme would be, undoubtedly, that the release of so many protons would make the system very acid in reaction, and this is known not to be the case. This criticism could be met by the assumption that the proteins of the muscle-fibre provide a very effectual buffer system, largely through their free amino- and carboxyl-groups.

Suppose that, in the resting state (relaxation), the proteins are iso-electrically charged so that the ammonium- and carboxylate-groups attract one another. The uptake of protons by carboxylate-groups to form unionized carboxyl-groups would destroy their attraction for the ammonium-groups and allow of a profound re-orientation of the protein "chains."

It seems probable that, whatever the actual nature of the process, there must be a very great difference in the molecular orientation of relaxed and contracted muscle-fibres. Even though there is no direct experimental evidence to support the foregoing hypothesis, such evidence as does exist has so far not been interpreted to furnish a fully satisfactory explanation of the phenomenon of muscle-fibre contraction.

Despite the fact that the metabolic processes of muscle-fibres are very much more complicated than suggested above, it is still possible that the uptake of protons by carboxylate-groups could be responsible for the maintenance of the *status quo ante* as far as the acidity of the muscle-fibre tissue was concerned.

Could it be possible, if such a process as outlined were involved, that the negative phosphate radicals, left by the transfer of protons to proteins, would provide the necessary potential gradient to cause the influx of sodium ions into the muscle-fibre?

Eccles, in his book, *The Neurophysiological Basis of Mind*, has much to say on the role of sodium ions in the transmission processes, but has not reached a final conclusion regarding the nature of the "sodium-pump" postulated to effect their transfer.

To shed further light on the problem of muscle-fibre contraction, it should prove of interest to know in what particular sequence the events occur, during muscle-fibre relaxation, to allow for the re-setting of the mechanism so that the next contraction can take place.

Is it a "zip-fastener" mechanism that is re-set by being traversed in reverse, or is it a "gun" mechanism where the way is cleared for a new discharge simply by the passage of the bullet through the bore of the barrel? This is a problem that the muscle-physiologists have yet to solve.

Anti-Cholinesterases.—The assumption that cholinesterase does not exist as a separate entity leads to the necessity of explaining the mode of action of the so-called anti-cholinesterases.

There seems to be no reason why it should not be possible to depolarize the receptor-surface by the use of two separate compounds, each of which carried only one kind of electrical charge—one negative, and the other positive. Thus, if the positive groups of the

receptor-surface were first combined with negatively charged molecules, then the combination of positively charged molecules with the carboxyl-groups of the receptor-surface would liberate the protons necessary to initiate effector-cell activity.

This concept may conceivably be justified by a consideration of the phosphate-ester type of anti-cholinesterase. In this case it is considered that a twin-polar phosphate-ester, (having two negatively charged oxygen atoms), such as TEPP, can combine with the positive ammonium-groups of the receptor-surface. This would still allow for the approach of the cationic head of ACh molecules to the carboxyl-groups, with the subsequent release of protons.

This double combination of the receptor-surface "centres" with two different types of molecules is enough to elicit the usual response of the effector cell, but since the ester moiety of ACh is not at all concerned in the combination with receptor-surface "centres," the response is produced WITHOUT the accompanying hydrolysis of ACh. It would also be possible to produce neuro-muscular transmission block, since the usual mechanism is not available to remove the ACh from the receptor-surface.

Furthermore, the hydrophobic (lipophilic) nature of the anti-cholinesterases would provide additional protection to the ACh against possible attack by water molecules. The lipophilic character of the anti-cholinesterases does not seem to have received any consideration in this regard by proponents of the current theory.

Many of the data derived from experimental work with anti-cholinesterases and serum or erythrocyte cholinesterases may not be strictly applicable to the situation at the neuro-muscular junction.

The stereochemical configuration of anti-cholinesterases such as eserine would influence the combination pattern of ACh with the receptor-surface, and it would be worth while to investigate the structure-activity-relationships of such compounds from this point of view.

Failure to Elicit Response.—The fact that bi-polar compounds, such as neostigmine, do not elicit the usual response from the effector-cell may be accounted for in the following way:

In order to elicit a response it is necessary for a certain minimal number of released protons to be exceeded. If the molecule be so large that it blankets off some of the carboxyl-groups, because it is possible to pack only a certain number of molecules on to the receptor-surface, then there would not be enough protons released to initiate effector-cell activity.

The comparative blocking effect should be greater for a large molecule than for a smaller molecule with an equal number of charged "centres." The effect of ACh, in addition to that of the anti-cholinesterase, will depend upon the number of unshielded carboxyl-groups, and this in turn will depend upon the concentration and stereochemical configuration of the anti-cholinesterase.

ACh Blocking Agents.—Twin-polar compounds, such as decamethonium and tubocurarine halides, may produce neuro-muscular transmission block because they react with the carboxyl-groups on the receptor-surface normally accessible to ACh. Having once combined with the carboxylate-ions through their cationic "centres" there is no mechanism whereby they can be removed from the receptor-surface because there is no hydrolysis to give rise to an acid component. It would be possible to pack more decamethonium than tubocurarine molecules on the receptor-surface, thus releasing more protons in the case of decamethonium. The released protons may well exceed the threshold value and thus produce an initial contraction of the muscle-fibre followed by complete blockage of the transmission. With tubocurarine the initial release of protons would be below the threshold value and only blockage would be apparent. These effects have been observed, but no explanation offered for them.

The anti-cholinesterases may be able to antagonize the blocking effects of compounds such as tubocurarine, because the attraction of their negative groups, for

the cationic "centres" of the blocking agents, is greater than that of the receptor-surface negative carboxylate ions. This would seem to be a more reasonable explanation of the effect than any consideration of their purely anti-cholinesterase properties could afford, because it is fairly logical to assume that the action of tubocurarine is not potentiated or decreased by inhibition of cholinesterase, which cannot hydrolyse the drug since no ester linkages are present.

Conclusion.—Referring to the process of transmission, during the Symposium mentioned in the introduction, Otto Loewi said, "The nature of this combination is unknown, and so is the character of the primary change of the membrane produced by the combination."

The receptor-surface hydrolysis theory presented here, with its concomitant negation of the need for a separate cholinesterase, is an attempt to explain the nature of these phenomena. Whether or not it is a nearer approach to an understanding of an exceedingly complex problem remains to be seen, but any effort must be worth while that can help to dispel some of the pessimism of Sir Henry Dale, who had this to say: "I certainly do not expect that a final solution will appear in my time."

BIOCHEMISTRY OF VITAMIN B₁₂

Abstract of a symposium arranged by the Biochemical Society (London) to discuss the biochemistry and functions of vitamin B₁₂.

This truly remarkable substance was isolated only seven years ago. Its close connection with a mortal disease of man and its importance in animal nutrition fired the interest of workers in many laboratories, and progress in its study has been encouragingly rapid.

Dr. E. Lester Smith (Glaxo Laboratories, Ltd.), the first speaker, reviewed the isolation and chemistry of vitamin B₁₂, and described the unravelling of its structure, in which the Glaxo workers so fruitfully joined hands with Sir Alexander Todd's group in Cambridge and Dr. Dorothy Hodgkin in Oxford. He recalled the fascinating story of how he and his colleagues almost simultaneously with the Merck group in the United States produced the crystalline vitamin from liver, which contains only one part of it per million, with only clinical tests as guide. Liver is now entirely uneconomic for large-scale preparation. Commercial production is by fermentation, and the vitamin comes either from spent liquors in the manufacture of streptomycin and aureomycin or is made by a variety of micro-organisms in special fermentation. Dr. Smith outlined some of the steps of its isolation from such materials, in which chromatography plays an important and essential part.

The molecular weight of cyanocobalamin (vitamin B₁₂) is about 1350 for the anhydrous substance, and the empirical formula lies within the limits C₆₃₋₆₄ H₈₄₋₈₈ O₁₈₋₁₉ N₁₄ P Co. The cyanide group attached to the central cobalt atom may be replaced by other acid radicals, giving rise, for example, to nitritocobalamin (vitamin B_{12c}) and hydroxocobalamin (vitamin B_{12b}). Hydrolysis with warm acid splits off the characteristic 'nucleotide', 5,6-dimethyl-1-(α -D-ribofuranosyl) benzimidazole-2' (or 3') phosphate, the rest of the molecule being the naturally occurring factor B, the parent substance of the whole family of vitamin B₁₂-like factors so far described, more fully considered by the next speaker. Hydrolysis of vitamin B₁₂ with cold 2N hydrochloric acid in the presence of nitrite leads to the formation of a series of red carboxylic acids containing one to six acidic groups and still retaining the nucleotide, and of another series of seven orange-coloured acids that have lost the nucleotide (that is, are derived from factor B). Of factor B itself and its derivatives, only the hexa acid has yet been crystallised, and it is this compound that proved so useful in further crystallographic study. The hydrolytic procedures reveal the presence within the vitamin B₁₂ molecule of six CONH₂ groups, the nucleotide attachment being provided by a seventh,

Dg-1-aminopropan-2-ol forming the link, with the amide at one end and phosphoric ester at the other. The second phosphoric acid hydroxyl is accounted for by attachment to ribose. Consideration of the properties of the molecule leads to the concept that the third hydroxyl is masked by internal salt formation in vitamin B₁₂ itself, the centre co-ordination complex in it being basic and neutralised by the phosphoric acid group on the rest of the molecule, a configuration supported by X-ray crystallographic examination at Oxford.

The crystallographic approach has proved astonishingly fruitful, and has yielded a deep insight into the structure around the cobalt atom; this is almost that of a porphyrin, the difference being that in vitamin B₁₂ two of the four rings are directly linked without any bridging atom. As pointed out by Dr. Dorothy Hodgkin in the discussion, X-ray crystallography indicates that this inner nucleus is attached to a system of acetic and propionic acid residues. The usefulness of the X-ray work is further demonstrated by its fixing the point of attachment of the phosphate to the third position on the ribose chain.

The introduction of labelled atoms into vitamin B₁₂ is of great value in analytical, microbiological and, especially, clinical work, and Dr. Lester Smith described the preparation for haematological studies of vitamin B₁₂ labelled with all four available radioactive isotopes of cobalt.

Dr. S. K. Kon (National Institute for Research in Dairying, Shinfield, near Reading) described other factors related to vitamin B₁₂. Examination of natural materials that have undergone microbial fermentation, such as rumen and gut contents, faeces, silage and the like, by methods similar to those used for the isolation of vitamin B₁₂, reveals in them the presence of red, cobalt-containing pigments closely related to vitamin B₁₂, but differing from it in microbiological activity and, with one exception, absence of growth-promoting properties for animals. Through efforts of workers at Shinfield and at Glaxo Laboratories, of Wijmenga in Holland, of Pfiffner in the United States, and of Bernhauer in Germany, some ten such substances have been separated and six so far characterised in reasonable detail. One of these is factor B, and the other five differ chemically from vitamin B₁₂, only in the nature of the nucleotide. Thus, in pseudovitamin B₁₂, adenine instead of 5,6-dimethylbenzimidazole is the nitrogenous base. Factor A contains 2-methyladenine, a purine hitherto not encountered in Nature, and factors G and H contain respectively hypoxanthine and 2-methylhypoxanthine. The base of the fifth factor, vitamin B_{12min}, which also yields factor B on hydrolysis, is not yet known, though it is probably not a purine derivative. Vitamin B_{12min} is the only naturally occurring vitamin B₁₂-like factor so far tested found to be active in pernicious anaemia. Though they may have no direct function in the animal, their microbiological activity indicates that these vitamin B₁₂-like factors may be important metabolites for micro-organisms, necessary, for example, for the proper functioning of the rumen or gut flora. The Shinfield workers were able to prepare factor A and pseudovitamin B₁₂ in guided biosynthesis by offering factor B and the corresponding nitrogenous base to a *Bacterium coli* mutant; and with substituted purine compounds and with benzimidazole derivatives they obtained in this way a series of new, 'unnatural' analogues of which the monomethylbenzimidazole, and the benzimidazole one also obtained by Fantes and O'Callaghan by adding *o*-phenylenediamine during fermentation of *Streptomyces griseus*, were of particular interest because of their activity for higher animals mentioned later on in this summary article. 9- β -Ribose derivatives of adenine were not incorporated, in agreement with Dr. Hodgkin's statement that only 7- α -derivatives would fit into the molecular structure of vitamin B₁₂. The biosynthetic approach opens up possibilities of production of vitamin B₁₂-like factors with vitamin or antivitamin function.—Nature, May 21, 1955.

THE BRITISH COMMONWEALTH AND ESSENTIAL OILS

A recent lecture on "The Commonwealth as a Source of Essential Oils" was given to the Royal Society of Arts, London, by Mr. M. F. Carroll. Some of the points treated in the lecture are outlined below.

The essential oils, of very great variety, although few of them were without constituents of the terpene family, might be obtained from almost any part of plants, e.g. seeds, flowers, leaves, roots or the wood itself, in contrast to the fixed oils, which had a very specialised chemical composition centring on the fatty acids. With their intense odours and flavours they covered almost the entire range of man's olfactory experience.

Of a total assumed world production of about £100 million, of which turpentine, the most important, contributes about £20 million, the Commonwealth production is below £4 million, of which India and Ceylon, with lemongrass, sandalwood, palmarosa and citronella as the principal oils, produce about one half. India is the only Commonwealth producer of turpentine.

The most common process in production was steam distillation; expression was also used, and fat and solvent extraction for the most delicate oils such as jasmine.

The extraction of isolates—the individual constituents of the essential oils—e.g. geraniol, citral, nerol, by physical or chemical methods was an important part of the industry.

Some factors affecting production were climate, labour costs, transport, local factors like experience and "know-how," and genetics.

Some oils were a by-product of a major product, e.g. the Californian sweet orange oil production. Fashion also played an important part, causing fluctuations in production.

To decide which essential oils should be produced in the Commonwealth, trends in the industry should be considered; the increasing standard of living throughout the world, for instance, resulting in greater demand. On the other hand, the increased synthetic production of important constituents of essential oils had an adverse effect. The best-known case was the almost complete replacement of oil of wintergreen by the purely synthetic methyl salicylate. In spite of synthetic production, there were many medium-priced and cheap oils which will continue to hold their own, e.g. sandalwood, patchouli, peppermint and eucalyptus.

To improve Commonwealth production, more planning, better use of available techniques, and greater efforts to improve the existing equipment were suggested; there should be a study of the cultivation and acclimatisation of plants not indigenous in the Commonwealth, but of economic importance—that is, not what is available, but what the public wants. The utilisation of little-known essential oils of the Commonwealth in the isolates and chemical industries should be developed. Examples were *mindii* in S. Rhodesia and citral from *Backhousia citriodora* in New South Wales. The author also proposed closer co-operation between commercial interests in the U.K. and the growers.—Chemistry & Industry, May 28, 1955.

VEGETABLE OILS

A Review of World Production

The world production of vegetable oils in 1953-54 was the largest ever recorded, being an increase of 4 per cent. over production in 1952-53, and approximately 25 per cent. more than pre-war output. According to the report on vegetable oils and oilseeds issued by the Commonwealth Economic Committee, the Commonwealth provided 24 per cent. of world oil and oilseed production, compared with 23 per cent. in 1952-53 and in pre-war years.

Sesame

Sesame (til, simsim, gingelly, benniseed) is an annual plant of tropical, sub-tropical, and warm temperate regions. It is cultivated almost exclusively in countries with small peasant economies, because mechanical harvesting cannot readily be employed. The crop tends to be grown on poorer soils, as it makes excessive vegetative growth with a reduction in yield of seeds. The oil is used for much the same purpose as olive oil, but, to a minor extent, is used also as a vehicle for medicaments and as a dispersing agent in insecticide bombs. The oil content of sesame is approximately 50 per cent., the commercial extraction rate being from 35 per cent. to 50 per cent.

Commonwealth countries produced 39 per cent. of the world sesame crop in 1953-54 (the 1948-52 average was 34 per cent.), India being the most important producer. Some 76 per cent. of the Indian sesame crop is crushed for oil, mainly in village *ghanis*; 3 per cent. is retained for seed; and the remaining quantity used directly for food, as a sweet confection.

Olive

Olive trees, despite their ability to grow on the poorest soils, flourish only in areas having a Mediterranean climate. The better grades of olive oil are produced from the first crushing of the fruit, and may be used without refining or further processing. The quality of the oil varies from year to year because of (a) unfavourable weather during the ripening period, (b) severe fly (*Dacus*) infestation, that leads to a relatively high animal fat content of the oil. Production figures relate only to edible olive oil, but there is, in addition, an important production of inedible oil by solvent methods from the marc. These residual oils, commercially known as "sulphur oil" and "olive kernel oil" or "sansa," are used for soap-making and in wool-combing.

Castor

The castor plant grows wild in most tropical and sub-tropical regions, but is cultivated as an annual crop in the important producing countries. The oil (about 43 per cent. by weight of the seed) is used for medicinal purposes, the manufacture of lubricants for internal combustion and jet engines, and in soaps, paints and plastics. The absence of accurate harvest statistics for many countries makes it difficult to estimate the world production. Prices of castor oil rose to high levels in 1951, because of the U.S. military demand after the start of hostilities in Korea, but have now fallen. India is the most important Commonwealth producer, but, despite some extension in planted areas, statistics indicate that recent harvests have been below pre-war levels. Production of castor seed was stimulated in various African countries by the high prices that prevailed from 1950 to 1952. Much of this seed is harvested from wild plants, hence output is extremely sensitive to variations in market prices. In South Africa, since the introduction of a spineless seed which can be harvested mechanically, cultivation of castor as an annual crop has significantly increased.—"Pharm. J.," March 5, 1955.

PHARMACEUTICAL INDUSTRY, GREAT BRITAIN

Points of interest in the Annual Report of The Association of British Pharmaceutical Industry include:—

Pharmaceutical Exports

British exports of "medicinal and pharmaceutical products" amounted to £33.6 million (provisional) in 1954, against £29.9 million in 1953, an increase of 12.4 per cent.

Among the individual items for which substantial increases were recorded were vitamins; barbiturates; tablets and other preparations of sulphonamides; and antibiotics other than penicillin. The export of bulk sulphonamides (figures of which are not included in the totals expressed above) fell by nearly 50 per cent., from £1.3 million to £0.7 million. Although the exports of penicillin and its preparations were even higher in quantity than in 1953 there was a decrease in value, as a result of the fall in world prices, from £4.5 million

to £3.4 million, but there was a compensating increase in sales of other antibiotics from £3.3 million to £4.1 million.

The main overseas markets were Australia £3.3 million and India £2.6 million. Exports to Pakistan, the Union of South Africa, New Zealand, the Irish Republic, Nigeria and Egypt all exceeded £1 million. Other good markets were the Gold Coast, Singapore and Malaya, Hong Kong, Canada, France, Burma, Thailand and Argentina. Exports to Turkey fell off owing to payment difficulties, and unfortunately there is no immediate prospect of conditions improving in Brazil, formerly a most profitable market.

Control of Expenditure on Drugs

The National Health Service introduced a fundamental change in the economics of medical treatment, in that the State assumed responsibility for meeting the cost of practically all the drugs supplied on doctors' prescriptions and used in hospitals. Consequently, the State has the duty of ensuring that the prices of drugs paid for out of public funds are fair and reasonable. It is of profound importance, however, that in discharging this duty the State should take into account the effect of its policies and decisions upon the welfare and progress of the industry.

During the past year the Association has, in its evidence to the Guillebaud Committee and in its discussions with the Health Departments, made it clear that the relationship between the industry and the National Health Service cannot be considered in isolation. Research, exports and N.H.S. trade are complementary, so that restrictions affecting anyone will have adverse effects upon the others. Upon continual research depends success in export markets, a high degree of self-sufficiency at home, and a high standard of service to the community through the medical profession. Export trade can only flourish where there is reasonable freedom of sale in the home market, which, for the prescription drugs with which the Association is concerned, is the N.H.S. market; the National Health Service both benefits from, and contributes to, the savings in production costs and standing charges which result from meeting the combined home and export demand. Similarly, there is a saving in research charges per unit of production when, as is the case, these charges are spread over both export and home sales.

It has also been pointed out that the increased use of proprietaries by the Health Service is a natural consequence of the introduction of new and more effective drugs, whose discovery, development and production entail heavy investment and considerable risk.

COMPARISON OF PHARMACOLOGY OF CHLORPROMAZINE, PROMETHAZINE AND PETHIDINE

J. Kopera and A. K. Armitage.
("Brit. J. Pharmacol." 1954, 9, 392.)

The following properties of the three drugs were compared: (1) The fall in rectal temperature of mice. (2) Paralysis of the cat sciatic-gastrocnemius and rat phrenic nerve-diaphragm preparations; this action was exerted directly on the muscle and not through neuromuscular blockage. (3) Chronic toxicity in young rats; a temporary retardation of growth was observed. (4) Extension of the duration of sleep induced in mice with pentobarbitone. (5) Potentiation of morphine analgesia in mice; contrary to previous reports, no potentiation was found with chlorpromazine and pethidine, and promethazine had only a slight action. (6) Anti-adrenaline action on the vessels of the rabbit ear, the blood pressure of the spinal cat and the isolated rabbit uterus. (7) Anti-acetylcholine action on the isolated guinea-pig ileum and on the mouse pupil. Chlorpromazine alone was tested on the salivary secretion of the cat, and found to have a definite inhibitory action. (8) Antihistamine activity on the guinea-pig ileum and bronchial resistance. (9) Local anaesthetic by the guinea-pig weal method and by ability to induce plexus anaesthesia in frogs. The comparison showed chlorpromazine to be more active than promethazine except in its anti-acetylcholine, antihistamine and morphine-potentiating

actions. Pethidine was the least active of all preparations. Chlorpromazine more effectively antagonised the vasopressor effects of adrenaline than of noradrenaline in the spinal cat. No adrenaline reversal was noted, even when the pressor effect was abolished. The actions of chlorpromazine, promethazine and pethidine were discussed in the light of clinical findings.—"J. Pharm. Pharmacol." 7, 5, 354 (1955).

DECOMPOSITION IN A.P.C. TABLETS

Experiments which indicate that the nature of the lubricant has a considerable influence on the rate of decomposition of aspirin in tablets of aspirin, phenacetin and caffeine are reported by D. Ribeiro et al. in the Journal of the American Pharmaceutical Association (Sci. ed., 1955, 44, 226). The lubricants tested, in order of decreasing effect, were talc, talc plus mineral oil, mineral oil, glyceryl monostearate, stearic acid, magnesium stearate, calcium stearate. The first four were not significantly different from each other, but as a group showed considerably less decomposition than the other three. Two proportions of lubricants were used. The higher level caused a general increase in decomposition and a striking increase when the lubricant was one causing a large effect, such as calcium stearate or stearic acid. The kind of aspirin (10 per cent. starch granulation or 40-mesh crystal) was found to be important when certain lubricants were used, particularly with glyceryl monostearate, stearic acid, mineral oil, and talc and mineral oil, the crystalline aspirin having superior stability in most cases. Moisture content also influenced the effect, high moisture causing less decomposition. As a result of this study, the following formula for A.P.C. tablets was developed:

Phenacetin	0.160 gm.
Caffeine, anhydrous*	0.032 gm.
Acetylsalicylic acid (40-mesh)	0.227 gm.
Starch	0.042 gm.
Talc	0.008 gm.

*Granulate with 10 per cent. starch paste in equal parts water and syrup.

The product was relatively stable and acceptable as to hardness, appearance and disintegration.—"Pharm. J." May 14, 1955.

STERILISATION OF SHARP INSTRUMENTS

If sharp-edged surgical instruments are boiled or autoclaved, their sharpness is rapidly impaired. The heat greatly accelerates the inherent electro-chemical tendency of the iron to enter solution as ferrous ions, and corrosion occurs. A method of preventing such corrosion, described by Havener (F. Amer. Med. Ass., 1955, 157, 718) exploits the knowledge (familiar to corrosion engineers) that the site of corrosion is always electro-positive in relation to the rest of the instrument.

In Havener's method, the surgical instrument is connected to the negative pole of a three-volt battery, and a separate piece of metal is connected to the positive terminal. Both are then immersed in the boiling distilled water used as a sterilising medium. The electric current orientates the surgical instrument as a cathode, and all corrosion is forced to occur on the positive metal plate. The sharper the edge of the instrument, the greater is the corrosion resistance bestowed on it by this technique. Using this method, delicate instruments have been boiled repeatedly for four-hour periods without perceptible loss of sharpness.

The author recommends that instruments should be boiled for 15 minutes to completely sterilise the deepest crevices. (Germicidal solutions, he points out, cannot kill micro-organisms that they do not contact, for example beneath films of anti-rust oil, or within clumps of fibrin in difficult-to-clean crevices.)

The following procedures are recommended:—(1) Use distilled water in the steriliser to avoid mineral deposits, and change it daily. (Distilled water will carry an electric current, contrary to popular belief.)

(2) Bring the water to boiling point before immersing

the instruments, to avoid the formation on the instruments of bubbles from dissolved gases.

(3) Place the instruments into an anti-rust germicidal solution immediately on removal from the steriliser. The following formula (University of Michigan formulary) is suggested:—

Isopropyl alcohol (99%)	900 cc.
Methyl alcohol	72 cc.
Formaldehyde solution (37%)	144 cc.
Benzalkonium chloride solution (12.8%)	144 cc.
Sodium nitrate	18 g.
Distilled water to	1800 cc.

The instruments should be kept in this solution until they are rinsed immediately before being laid out for use.—*The Alchemist*, April, 1955.

EFFECTS OF METHYLPENTYNOL

P. Trotter.

(*"Lancet,"* 1954, 267, 1302.)

In 3000 unselected ambulant dental patients premedicated with methylpentynol no deleterious effects were observed. The object of this investigation was to determine the effect of methylpentynol on the speed of reaction of ambulant persons. The tests were made on a number of healthy students, using a car-type reaction tester and a McDougall-Schuster dotter. Similar tests were made using alcohol. In the tests made with the McDougall-Schuster dotter, blank capsules were used as controls. In all, 768 tests were conducted. Almost all the students tested noted subjective effects following administration of 500 mg. of methylpentynol. The onset was fairly constant at 10 to 15 minutes, when there was a feeling of elation lasting 15 to 30 minutes, and from then until the effect wore off there was a period of contentment, calm and confidence. The total effect of 500 mg. lasts about an hour, but varies with individuals. In the majority of cases the speed of reaction was improved within 15 minutes after administration; in this its action differed from that of alcohol, which either has little effect on the speed of reaction or causes a deterioration. A dose of 500 mg. of methylpentynol does not seem to produce any of the undesirable signs of intoxication by alcohol, though possibly larger doses than this might give rise to similar symptoms.—*J. Pharm Pharmacol.*, 7, 5, 356 (1955).

PACKAGING OF PHARMACEUTICALS

In an editorial note the *Pharmaceutical Journal* (May 14, 1955) points out that the storage and packaging of pharmaceuticals requires a knowledge of the physical, mechanical and chemical properties of the materials available for packaging, and of conditions under which the product will be transported, stored and used.

The selection of material for the packaging of pharmaceutical preparations is conditioned by the need for avoiding any substance which will contaminate the product with, for example, acid or alkali or metallic radical, or which is permeable to liquids or gases. It may have to be elastic, as in the linings of caps; soft, as in collapsible tubes, and unaffected by heat where it is used for sterilisation purposes. A widening choice of materials is becoming available, but that is not an unmixed blessing because, in view of incomplete knowledge about their properties, difficulties arise in drawing up specifications adequate for pharmaceutical purposes. Much has been done in the direction of standardisation of sizes and shapes of containers, but much requires to be done on the standardisation of packaging materials for pharmaceutical products. In the selection of materials and the elaboration of packages guidance can be obtained by simulating conditions which the package or material is likely to meet, without overlooking, of course, the question of usefulness to the ultimate consumer, the patient. He must, for example, be able easily to replace the cap on a jar or tube of ointment, and to re-make the seal between container and cap, considerations which the pharmacist at the

dispensing counter is as familiar with as is his colleague in the manufacturing laboratory. The final design of pack usually has to be adaptable to production-line methods.

Standardisation of size, therefore, should be useful both to the manufacturer and to the pharmacist in dispensing practice.

PHARMACEUTICAL EDUCATION

Abstract of an address in Aberdeen by Mr. Granville Shaw, member of Council, Pharmaceutical Society of Great Britain.

The speaker gave an account of the various views which had been submitted to the Society's Education Committee during the past 12 months on the subject of the Society's education policy. He said that pharmacists might be divided into two classes—those in retail and hospital practice, and those in teaching institutions, manufacturing laboratories, research laboratories, and in administrative work. Both were essential to the modern fabric of pharmacy, and both had a place on the Register of Pharmaceutical Chemists. That dichotomy in practice corresponded roughly to the bifurcation in academic training which took definite shape at the end of the two-year Pharmaceutical Chemist course, when those students who wished to continue their academic training proceeded to take degrees in pharmacy, and in most cases to make their career in laboratories, and not in retail or hospital pharmacy. Students of that class would naturally prefer to take their practical training in the sphere which they were intending to enter. There appeared to be a general consensus of opinion that the period of practical training should be two years, whether taken before or after the academic course, except in the case of graduates who had taken the three-year course and wished to enter laboratories, in which case one year might be considered adequate. He thought a good case could be made out for making it compulsory for not less than one year of the two years' practical training to be taken in retail or hospital work.—*Chemist & Druggist*, April 9, 1955.

GENERAL MEDICAL COUNCIL

Approved Names

Approved Names are devised or selected by the British Pharmacopoeia Commission, and the intention is that if any of the drugs to which these Approved Names are applied should eventually be described in the British Pharmacopoeia the Approved Name should be its official title.

The issue of an Approved Name does not imply that the substance will necessarily be included in the British Pharmacopoeia or that the Commission is prepared to recommend the use of the substance in medicine.

The names appearing in the second column of the following list include some registered trade marks.

Supplementary List, August, 1955

Approved Names	Other Names
Aldosterone	11 β :21-Dihydroxy-3:20-dioxo-4-pregnen-18-al Electrocortin Aldocorten
*Amiphenazole	2:4-Diamino-5-phenylthiazole Daptazole, DHA-245
*Bemegride	β -Ethyl- β -methylglutarimide Megimide
Demecolcine	Deacetyl-methylcolchicine Colcemid
Glutethimide	α -Ethyl- α -phenylglutarimide Doriden
Normethadone	6-Dimethylamino-4:4-diphenyl-1-hexan-3-one
Oxycinchophen	3-Hydroxy-2-phenylcinchonic acid

*It is interesting to note that the names Amiphenazole and Bemegride were coined after collaboration between the General Medical Council and the Editorial Committee, A.P.F.

CONTROL OF ARGENTINE ANTS

A recent report on Current Research by C.S.I.R.O. gives the following information:—

A satisfactory method has been developed for the control of the Argentine ant, using chlordane or dieldrin sprays. The Argentine ant, now established in a few localities in Australia, is at present mainly a domestic nuisance, but it could become a serious agricultural pest. If the ant invades the Murray Valley or Murrumbidgee Irrigation Areas, or the coastal belts of New South Wales and Queensland, it will cause heavy losses to producers of citrus, vines, bananas, sugar and pineapples. It can be a particularly serious problem if it infests abattoirs and food processing plants where insecticides cannot be applied. The Argentine ant was first discovered in Australia at Melbourne in 1939, and was originally introduced from the Americas. Western Australia is the most seriously affected State—over 30 square miles were reported as infested several years ago, including 10 square miles of market gardens and small orchards near Perth. Victoria and New South Wales each have less than five square miles at present.

To be successful, action against this pest must be organised for the whole of the affected areas. Co-operative efforts between C.S.I.R.O. and State and local authorities in a full-scale eradication campaign are yielding promising results in Sydney. Sixty-four separate infestation areas have been discovered and barrier sprayed. Initial sprayings were made with 2 per cent. chlordane emulsion. More recently, $\frac{1}{2}$ per cent. dieldrin spray has been used. Similar co-operative work is going on successfully in Western Australia. It has been found that 2 per cent. dieldrin spray applied 2½ years ago is still killing ants invading the treated area, and 1 per cent. spray is still killing ants 1 year after application.

EFFECTS OF ATOMIC RADIATION

Science (April 15, 1955) reports that the National Academy of Sciences, U.S.A., is to undertake a broad appraisal of the effects of atomic radiation on living organisms, and will seek to identify questions upon which further intensive research is urgently needed. This project was announced on April 8 by Detlev W. Bronk, president of the National Academy. The study has been assured financial support by the Rockefeller Foundation, which has already made an initial grant for planning purposes.

Lewis L. Strauss, chairman of the U.S. Atomic Energy Commission, has assured the Rockefeller Foundation and the National Academy of the commission's full co-operation. Extensive investigation of radiation effects has been sponsored by the commission since its establishment, and data obtained from this research will be made available for the new study. Expenditures for the AEC's biological and medical programme have totalled more than 165 million dollars since 1950, and more than half of this sum has been expended for research on the effects of atomic radiation on living organisms.

Wide differences of opinion exist regarding the nature and degree of human hazards involved in the use of atomic energy, and Bronk said that the academy welcomed the opportunity to make a dispassionate and objective effort to clarify the issues, which are of grave concern, as well as of great hope, to mankind.

The academy will appoint a committee of scientists, supported by an appropriate staff, to carry out the study. Some of the committee members will have an intimate contact with the work of the Atomic Energy Commission, and will, therefore, be particularly well informed concerning the background of the problems under consideration. The investigations, deliberations

and ultimate reports of the committee would deal with all phases of the biological effects of the increasing use of atomic energy. The study will collect and evaluate scientific information bearing on these problems; formulate whatever conclusions are, in its judgment, warranted by the available evidence; identify problems that require further research; and initiate such investigations. A searching appraisal of the state of medical knowledge regarding therapy and protection is also envisioned. Finally, the academy will evaluate the availability of information to scientists, physicians and the general public.

NEW ATOMIC ELEMENT DISCOVERED

The discovery of mendelevium, the heaviest atomic element known to man, was announced by the University of California at a recent meeting of the U.S.A. Physical Society.

The new element, number 101, is a synthetic matter heavier than plutonium or natural uranium.

DIETHYLAMINE SALICYLATE CREAM

A cream containing diethylamine salicylate 10 per cent. in a vanishing-cream base has been used by T. H. Howell for the relief of soft tissue rheumatic pains (*Brit. F. Phys. Med.*, 1955, 18, 62). Results in a controlled series of 24 patients suffering from chronic rheumatoid arthritis or osteoarthritis indicated that 19 patients received relief from pain, compared with six patients who received a "dummy" cream. The diethylamine salicylate preparation was then compared in 20 patients with a cream containing 1 per cent. ephedrine hydrochloride, and the results suggested that the salicylate cream gave more relief than the ephedrine cream. A further comparison with adrenaline cream (1 in 5000) indicated that the salicylate cream was the more effective. The author suggests that the beneficial results may be partly due to general reactions resulting from absorption of the salicylate into the body.—*Pharm. J.*, March 12, 1955.

FORMULATION OF TABLET IMPLANTS

K. S. Patel and E. P. Guth.

(*J. Amer. Pharm. Ass. Sci.*, Ed. 1954, 43, 754.)

In a preliminary series of experiments, the time for the complete absorption of tablets implanted into rats varied from 36-48 hours for polyethylene glycol 6000 to 17-19 days for methylcellulose (methocel 4000). No absorption of cholesterol or sterotex (hydrogenated fat) tablets was observed even after 8 weeks. To evaluate bases giving favourable results in the preliminary tests, tablets were prepared containing about 0.1 per cent. of phenol red, a substance which is completely excreted by rats. Tablets were made by the moist granulation process, using a 7/32 inch die and keeping the pressure employed constant as far as possible. The weight of the tablets was varied according to the base employed, in order to keep the thickness constant. The tablets were assayed for content of phenol red, and implanted into rats. The urine of the rats was collected every 6 hours, made alkaline, and the content of phenol red determined colorimetrically. Cholesterol tablets released the dye within 30 hours, whereas sterotex did not release it at all. Pharmagel B (gelatin) was satisfactory for implants intended to last not more than 72 hours, but was difficult to compress. Polyethylene glycol (carbowax) 6000 implants released the dye in 6 hours and methocel 4000 in 30 hours. The rate of release could be controlled by using varying proportions of these bases.—*J. Pharm. Pharmacol.*, 7, 5, 351 (1955).

**THESE—AND OTHER—
LOVELY MODELS
ARE SELLING
CHEMIST'S ONLY
Nyal TOOTHPASTE**

The "model" Nyal Toothpaste Campaign has now been appearing continuously in the daily newspapers and national magazines since October, 1954, with outstanding results.

More and more customers are asking specifically for long-profit NYAL Toothpaste—more satisfied users are returning to Pharmacy for repeat purchases of this "honest-to-goodness" dentifrice.

Our models have made Nyal Toothpaste known as the toothpaste with the dental detergent that really cleans teeth, leaving no soapy film, and so actually making teeth whiter in only 10 days.

Get maximum benefit from this concentrated advertising. Display NYAL Toothpaste in your windows and on your counters—and divert more dentifrice sales to Pharmacy!



RECOMMEND LOW-COST, HIGH PROFIT

Nyal TOOTHPASTE TO YOUR

PRICE CONSCIOUS CUSTOMERS

So little is needed to produce a rich foam that Nyal Toothpaste is more economical to use . . . Saves your customers money.

Never before have you had such an opportunity to change "price-conscious" customers to Chemist's only NYAL toothpaste.



TP.9.56



*effective topical therapy in allergic dermatoses
with one-tenth the concentration of hydrocortisone*

NEW TOPICAL OINTMENT

FLUDROCORTONE

ACETATE

10 times greater potency—skin disorders are relieved by one-tenth the concentrations required by hydrocortisone, the parent compound.

dramatic therapeutic response—lesions begin to clear almost immediately, edema subsides and itching is relieved; often effective where other agents have failed.

indications—allergic dermatoses of atopic, contact or non-specific origin, as well as nonspecific pruritus.

supplied—as a cosmetically acceptable ointment in two concentrations: 0.25% and 0.1% in 5 Gm. collapsible tubes.

MERCK & CO., INC.

FAIRFIELD, N.S.W.

Prescription Proprietaries and New Drugs

By Geoff K. Treleaven, Ph.C., F.P.S., of the Pharmaceutics Department, Victorian College of Pharmacy.

(For most of the products listed, full information as to dosage may be obtained from the "Prescription Proprietaries Card Service" of "The A.J.P.")

Amendments No. 2 to Proprietary Index for Use with P.B. List, 1955-56.

(Refer "A.J.P.," June, 1955.)



FIRST SCHEDULE

Item No.	Benefit	Proprietary Names (refer P.B. List for other manufacturers)
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27 CHLOROQUINE Add AVLOCHLOR (I.C.I.).

SECOND SCHEDULE (Restricted Drugs)

6 CORTISONE ACETATE Delete CORTADREN (Schering).

35 TETRACYCLINE PAEDIATRIC DROPS Delete STECLIN (Squibb).

SOME ANTI-PARKINSONISM DRUGS

Official or Approved Names	Proprietary Names
* Caramiphen HCl	PARPANIT (Geigy)
* Diethazine HCl	DIPARCOL (M & B)
* Ethopropazine HCl	LYSIVANE (M & B)
* Benzhexol HCl (Trihexyphenidyl)	ARTANE (Lederle); PIPANOL (Stearns)
* Procyclidine HCl	KEMADRIN (B.W.)
* Phenindamine Tartrate	THEPHORIN (Roche)
Cycrimine HCl	PAGITANE (Lilly).
* On N.H.S.	

NEWER ORAL DIURETICS

Mercurial	
Chlormerodrin	MERCLOLAN (P.D.); ORICUR (Andrews)
Non-mercurial	
Acetazoleamide-sulphonamide derivative	DIAMOX Tablets (Lederle).

PIPERAZINE PREPARATIONS

Piperazine salts are used for threadworm and roundworm infestations.

The following proprietary preparations are available:

ANTEPAR ELIXIR (B.W.'s); ENTACYL Tablets (B.D.H.); HELMEZINE Elixir (A. & H.); PYRAZINE Elixir (Hamilton); VERMAZINE Elixir (Sigma); PROXYL Syrup (Faulding); PIPAN Elixir (Lennon); Worm X; PIPERAZINE Elixir (Stearns).

SAFERSAN Powder (Boots) is a piperazine preparation for veterinary use, i.e., for pigs.

METHANTHELINE BROMIDE

Proprietary Preparations: BANTHINE (Searle); METHANIDE (Pharmedica); AVAGAL (Andrews); M T B 51 or VAGANTINE (Brunnengraber).

Propantheline bromide, i.e., PRO-BANTHINE, is a related drug.

Uses: Anticholinergic drug for peptic ulcer, etc.

PROCAINE AMIDE HCl—the amide analogue of the ester procaine.

Uses: In ventricular arrhythmias.

Proprietary Preparations: PROCARDYL (M. & B.) Injection (10%) vials of 10 c.c. PRONESTYL (Squibb)—0.25 gm. tablets and 10 c.c. (10%) Injection.

CHLORPROMAZINE HCl

Proprietary Preparations: LARGACTIL (M. & B.). THORAZINE (S.K. & F.)—not available on Australian market.

METHYL PENTYNOL or Methyl parafynol—non-barbiturate hypnotic and sedative.

Proprietary Preparations: SOMNESIN Capsules (B.D.H.); OBLIVON Elixir and Capsules (Brit. Schering); ATEM-POL Capsules (Norgine); INSOMNOL Elixir (Medo).

A.C.T.H. (ADRENO-CORTICO-TROPHIC HORMONE) PREPARATIONS

Strength	Proprietary Preparations
2.5 i.u.	SCHERING
10 i.u.	ACTON (D.H.A.); SCHERING; CORTICOTROPHIN (C.S.L.)
20 i.u.	CORTICOTROPHIN (C.S.L.)
25 i.u.	CORTROPHIN (Organon), SCHERING

A.C.T.H. DEPOT PRODUCTS FOR PROLONGED EFFECT

20 i.u. per ampoule	ANDROCORT (Andrews)
20 i.u. per c.c. (5 c.c.)	SCHERING
40 i.u. per c.c. (5 c.c.)	SCHERING
40 i.u. per vial	CORTROPHIN Z (Organon)
80 i.u. per vial (veterinary)	CORTROPHIN Z (Organon)



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Pharmacology for Pharmacy

By F. H. Shaw, M.Sc., Ph.D.(Lond.), Professor of Pharmacology, University of Melbourne.

Sixth Article

APPLIED PHARMACOLOGY (THERAPEUTICS)

Our last three discourses have given the pharmacology of certain substances which occur naturally in the body, and we referred to this as physiological pharmacology. Although at times this field touched on the realms of medicine. We are now going to confine our attention more strictly to the use of drugs in medicine. So first let us discuss those drugs used in the treatment of pain.

Analgesics

We have all experienced pain and have come to regard it as a warning signal. But what is pain? The physiologist knows very little about this. How does the discomfort of a headache differ from that of a stubbed toe? We do know that sensations from the skin or viscera are carried by special nerves to the brain, some of these nerves convey the feeling of pain. Pain, or at least the finer perceptions of it, is registered in the highest part of the brain, the cerebral cortex, that convoluted cap which is so characteristic a feature of the brain. Pain, although recognised in the cortex, is referred to the region whence it arises. An exception to this is abdominal (visceral) pain which is "felt" on some region of the body surface. The manner of this reference is not understood, but there are certain "rules" which enable the physician to tell which is the suffering organ. Beyond this our knowledge does not extend. Are there various types of pain? We talk of dull or shooting pain, but is there a difference. From the pharmacological point of view there seems to be a distinction between superficial or joint pain, visceral pain and headache because different drugs will not affect these classes in the same way. Sometimes pain is referred to a part of the body which is missing, e.g., an amputated limb. This condition of causalgia is very difficult to treat.

Throughout the history of medicine man has sought relief from pain. Until about three centuries ago his only solace was alcohol or some bland balm to lessen the irritation of an itch. It is difficult to tell when opium was introduced into pharmacy. The term "Thebaicum" was applied to several preparations which did not contain opium. In spite of much work (and the distribution of large sums of money) morphine still remains the first line of defence against pain. Even after the isolation of morphine many physicians still prescribed opium. The use of *parpaveretum* shows how old customs die hard. A little calculation will show on what slender basis rests the preference for the mixture of alkaloids.

	Ratio of weight of morphine to alkaloid	Ratio of dose of morphine to alkaloid	Effective Ratio
Codeine	1 : 20	1 : 6	1 : 120
Thebaine	1 : 50	1 : 5	1 : 250
Papaverine	1 : 10	1 : 10	1 : 100
Narcotine	1 : 3	1 : 10	1 : 30
Narceine	1 : 30	1 : 10	1 : 300

Thus we see that on the average the bye-alkaloids of opium have only 1 per cent. of the activity of the morphine present, i.e., an insufficient amount to influence the action of the principle alkaloid. Nor is

there any scientific evidence to show that there is any synergism between morphine and its co-habitants.

When one is learning the pharmacology of a drug it is not sufficient to learn to which group it belongs or what is its main action. We must also study its side actions. In the case of morphine they are as important as its analgesic effect, as we shall see. Morphine is classed as a central nervous system (C.N.S.) depressant. This is not always true. Morphine depresses the cells of the C.N.S. to obtund the sense of pain, to produce sleep and to depress the respiration. At the same time it may stimulate the cells of the vomiting centre in the medulla oblongata and produce nausea and emesis. In animals it may also stimulate the spinal cord and increase reflex action. Thus it is not correct to classify it wholly as a depressant. Its other actions consist of a depression of the cough centre (hence its use in cough remedies—it does not, of course, influence the cause or course of the cough) and a remarkable action on the alimentary canal in which it increases the tone of the smooth muscles around the lumen of the intestine and causes a constriction of the sphincters along the canal. The sphincters are bands of muscle which guard the entrance to the different regions of the canal. There is one at the entrance to the stomach and one to stop food leaving, there is another at the entrance to the large intestine, and so on. The result of this heightened activity is, paradoxically, a slowing of the passage of food. The *rhythmical* contraction and relaxation of the musculature, which propels the contents, does not take place. The result is constipation—not however in itself harmful. The pupil is usually constricted and in severe overdosage (poisoning) the pin point pupil is diagnostic. There is little effect on the cardiovascular system with therapeutic doses. Therapeutic doses may also produce a nasal pruritis which accounts for the nose scratching seen in addicts. Morphine has in marked degree two properties which are uncommon to most drugs, viz. tolerance and addiction. These two phenomena are often thought to go together, but that is not so. Tolerance to nitrites develops without addiction and addiction to cocaine with the development of little tolerance. Addiction is primarily a social problem and not a medical one. Morphine used for a week or so to alleviate pain (e.g., after an operation) will not lead to addiction. Used continuously to allay pain before death, it may, but this is of no importance compared with the incalculable benefit gained. Addiction usually occurs in social misfits. Initially it is a psychological problem. The taking of morphine produces, in some people, a sense of wellbeing, perhaps a floating, which is referred to as an euphoria, in which all worry vanishes. This is the starting point. Later a craving develops which is not satisfied by the initial dose because tolerance has set in. It is nothing for the dose in the addict to be increased one hundredfold above the therapeutic. If the drug is now withheld the abstinence syndrome (withdrawal symptoms) appear. Apart from sneezing, crying and convulsions, the patient feels absolutely miserable and in severe cases may be very ill. The only remedy is to continue the morphine or an allied analgesic. It is possible by "weaning" the victim to bring about a recovery, especially if this is combined with psychiatric treatment.



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Despite many popular but fallacious ideas the cause of the tolerance remains unexplained. It is not due to the increased destruction (catabolism) of the morphine. As tolerance can be obtained even if the morphine is injected intravenously it cannot be explained by decreased absorption.

Morphine is still the analgesic par excellence, but it has one serious drawback. The physician is frightened to use it in the large doses that may be necessary in the face of severe pain. The reason for this is that a deep respiratory depression is likely to ensue, which might even be fatal. The vomiting and constipation which may appear as side actions are by comparison mild. There are two ways to overcome this disability. Obtain a drug which antagonises the respiratory depression or synthesise a new analgesic. Both methods have been adopted.

N-allylnormorphine (Nalline, Lethidrone) has recently been introduced into medicine. It specifically antagonises the respiratory depression induced by morphine, but at the same time lessens the analgesia. However, the drug is itself not free from undesirable side effects. It can cause nausea, vomiting and may produce a profound sedation. It has found particular use in overcoming the asphyxia of new-born babies whose respiration has been depressed by morphine or heroin given to the mother and transmitted to them through the placental membranes.

Recently a new drug, 2-4 diamino 5 phenyl thiazole (Daptazole, DHA 245), has been developed in Melbourne. This drug antagonises the respiratory depression of morphine without affecting the analgesia. This compound has been successfully used in cases of intolerable pain in terminal carcinoma. Large doses of morphine (up to 2½ grains) may be given three or four times a day without any risk to the patient. This results in complete analgesia for the 24 hours. The thiazole derivative also counteracts the narcotic effect of the morphine and by controlling the dose of the former it is possible to regulate the degree of sedation of the patient. One of the surprising features of the treatment is the extremely bright mental outlook of about 75 per cent. of the patients. There are some indications that the onset of tolerance may be delayed.

One cannot pass from morphine without mentioning codeine and heroin. Codeine is an ubiquitous drug, nowhere as powerful or as dangerous as morphine. It is a mild but efficient analgesic and a potent cough suppressant (antitussive). Heroin, on the other hand, while having all the properties of morphine is by nature far more addictive. For this last reason the nations of the world are gradually banning its use, but not without opposition. The answer to those who wish to retain it is that it has not been shown scientifically to be measurably superior to morphine in any important respect, and that one of the most medically advanced nations has been able to practice the art without its aid for over 30 years—the United States.

Synthetic Analgesics

Because of morphine's two disadvantages—respiratory depression and addiction—a search has been made for substitutes. This search provides a classical example of the lack of relationship structure and function. In the initial stages this was the prime mode of attack, but despite the enormous amount of work applied to the problem little success was achieved. Indeed the first synthetic substitute, of any value, was discovered by accident. Eisleb and Schaumann were in search of a new synthetic atropine substitute when they fell upon pethidine. The synthetic chemist reminds one of the hopeful fisherman. Frequently he goes out with the best equipment, but very often returns with very small fish. Then again, another may launch forth on his fishing expedition with a meagre amount of equipment and come back with the prize, just as Eisleb and Schaumann did.

Before we discuss the pharmacology of the new analgesics let us consider the pharmacological means by which they were developed. In 1942 the supplies of

quinine for the Allied Forces were cut off. It was imperative to obtain a quinine substitute quickly as malaria could cause more casualties than shells. At this time the value of atabrine and plasmoquin had yet to be determined. It would have been quite impossible to have tested new antimalarials (or any other group) directly on human beings. The nature of the drug's action and its side effects must be established by animal tests. Before 1942 this had been done in a desultory manner, but now it was attempted on a large organised scale and was referred to as "screening." It represented a new era in the pharmaceutical industry. Since this period the process has been applied to the development of antihistaminics, analgesics, antibiotics, etc. It is empirical, costly, wasteful and man-hour consuming, but at present there seems to be no alternative method. We shall have occasion to return to "screening" in later articles.

As we have said in the opening paragraphs, pain is subjective and this presents a difficulty when one employs animals as test objects. Most screening tests for analgesics rely on some reflex sign that the animal has perceived a painful stimulus. By this is meant that a painful stimulus, usually heat, is applied to a blackened spot on the animal's forehead or tail, and the time is measured for the animal to withdraw the part from the stimulus. In most animals this is largely a reflex act mediated through the spinal cord and there is very little of the central (C.N.S.) component of pain as we know it. We know that this is so because the reflex withdrawal to a heat stimulus does take place when the brain has been removed. Experimentally it is possible to remove different parts of the brain, sometimes with little effect on the animal. If a large part of the brain is removed the animal may stop breathing, but if it is artificially respired the heart and other organs continue with their work, reflex acts through the spinal cord can still be elicited and to all intents and purposes the animal is "alive."

The reflex response to a painful stimulus takes time. The duration of time between the application of the painful stimulus and the response is lengthened when the animal has been given morphine. This is used as an index of analgesia and forms the basis of the screening test for new pain-killing drugs. As we have said, it is not a specific test, but only a makeshift. It measures more the effect of analgesics on spinal reflex actions than on the pain centres in the brain. Analgesics of the aspirin type do not affect spinal reflex actions and cannot be tested for by this means. Indeed at present we have no experimental method for developing and testing substitutes for aspirin.

In our next article we shall discuss the pharmacology of the newer synthetic analgesics and those members of the coal tar derivatives which have similar properties.

SYRINGES MUST BE ACCURATE

Complaints are sometimes received that vaccinations against Pulpy Kidney in sheep have not achieved desired results. In two recent observations made by Mr. A. Engel, the Department of Agriculture's Veterinary Officer at Hamilton, the fault did not lie with the vaccine.

One farmer was using an automatic syringe. The dose delivered was 3½ c.c. instead of the required 5 c.c. The dose setting was correct, but obviously the syringe needed adjustment.

Sheep owners are advised to test their automatic syringes regularly. This can be easily carried out by squirting a dose into the barrel of a hypodermic syringe.

In the other case the farmer took extraordinary precautions when he rinsed out his hypodermic syringe with methylated spirits after injecting each sheep. Little did he realise that contact with methylated spirits, even in very small quantities, rapidly destroys the effectiveness of a vaccine.—Department of Agriculture, Victoria (Bulletin No. 576, 23/8/55).

Antibiotics

A Paper given by E. H. Phillips, Medical Service Division, F. H. Faulding & Co. Ltd., before a meeting of members of the Pharmaceutical Society of South Australia, August 10, 1955.

Introduction

If we disregard the historical roots of the age-old empirical use of moulds and fungi, antibiotic medicine can be said to be a scientific discipline almost without a past. It is all present and future. Many of you here tonight have seen the marked change, perhaps drastic is a better word, which the introduction of antibiotics has produced in medical treatment and the practice of pharmacy.

Although the word "antibiotic" only came into general use following the extraction and clinical evaluation of penicillin by Florey, Chain et al. in 1939, the term, however, received reference many years prior to that time. The first use of this word is attributed to Vuillemin in 1889 to describe "the survival of the fittest" whereby a creature destroys the life of another to preserve its own. Antibiosis was adopted ten years later by Marshall Ward to describe microbial antagonism.

In the last 15 years some thousands of antibiotics have been discovered, but of these less than 20 have been found useful in the treatment of human and animal diseases.

Penicillin, the first true antibiotic, was discovered by Dr. Fleming at St. Mary's Hospital in London in 1929. This was at the time when Prontosil and the other sulphonamides were being hailed as the answer to the staph. and strep. It was not until 1939 that Florey and his co-workers isolated it and established its clinical application. Penicillin is effective in treating the diseases due mainly to gram positive organisms.

Tyrothricin was first described in 1939 by Dubos. While the discovery of Penicillin was in the nature of a fortunate chance, the finding of Tyrothricin was in large measure the result of planned research. Dubos was actually seeking an enzyme from soil bacteria to dissolve the capsule surrounding the organism which produces lobar pneumonia.

Tyrothricin consists of two main constituents—gramicidin and tyrocidine. Both of these are toxic drugs. This toxicity precludes the use of Tyrothricin systemically, and narrows the field of usefulness to topical application or instillation into certain body cavities. In addition to being toxic to the whole animal, both gramicidin and tyrocidine are injurious to red and white blood corpuscles. Tyrocidine is active against various gram positive and some gram negative organisms in vitro, but when given orally Tyrothricin is largely inactivated by pepsin, blood, serum and body fluids in general.

Between 1939 and 1943 Waksman isolated several antibiotic substances, including actinomycin, clavacin, fumagacin, micromonosporin and streptomycin. All of these proved too toxic for use in either human or animal diseases.

However, in 1944 he announced the isolation of streptomycin. This antibiotic proved active against the gram negative group of organisms. The great field of usefulness for streptomycin at the present time is in the treatment of tuberculosis.

In studying the bacterial flora of civilian wounds, Bacitracin was described in 1945. It was isolated from a patient by the name of Tracey. Bacitracin is a polypeptide, and, like other polypeptide antibiotics such as polymyxin, subtilin and eumycin, it is nephrotoxic. These drugs, therefore, when given parenterally must be carefully controlled, and the patients watched for

any sign of kidney damage. Bacitracin exhibits a marked synergistic action with other antibiotics, particularly penicillin.

Chloramphenicol was produced from a soil sample in 1947. Unlike the other antibiotics, chloramphenicol was rapidly synthesised following the determination of its structure. Chloramphenicol is a nitrobenzene compound. It was the first of the broad spectrum antibiotics. It is of value not only in many gram positive and gram negative infections, but also a number of diseases caused by Rickettsiae, Spirochaetes and Viruses. It is specific in the treatment of typhoid fever.

Chlortetracycline was the second broad spectrum antibiotic to be isolated. Its discovery in 1948 was followed by Oxytetracycline two years later. The determination of the chemical structure of Oxytetracycline was a mammoth task, and showed the difference between Aureomycin and Terramycin, the names given to these two antibiotics before the chemical structure was known. This knowledge paved the way for the introduction of the "nucleus" of these broad spectrum antibiotics which became available in 1953 as Tetracycline.

Like Chloramphenicol, the tetracyclines are active against gram positive and gram negative organisms, Spirochaetes, Rickettsiae, and some of the larger viruses and protozoa. They are indicated in the treatment of the pneumonias, urinary tract infections, venereal disease, bacteraemias, streptococcal infections, e.g. erysipelas and upper respiratory tract infections, bacillary infections such as brucellosis, amoebiasis, and rickettsial infections.

Another antibiotic used in medicine is Polymyxin, which is the name given to a group of several chemically related antibiotics isolated from various strains of *Bacillus polymyxa*. They are designated by the letters A, B, C, D and E. Polymyxin, as previously mentioned, is nephrotoxic. Of this group Polymyxin B has a less pronounced action on the kidneys. The main value of Polymyxin lies in its activity against certain organisms of the *Shigella* and *Salmonella* groups, and *Pseudomonas* Sp. When given orally generally in combination with other antibiotics, polymyxin has proved of value in treating gastrointestinal disease when the infection is confined largely to the intestine. In this dosage form Polymyxin is not absorbed to any degree from the intestinal tract, so systemic toxic effects do not occur.

Polymyxin is also used topically for eye, ear and skin infections where a *pseudomonas* is probably present.

The antibiotic Neomycin also consists of three or more closely related substances referred to as A, B and C. The chemical structure of Neomycin has not as yet been determined. It is active against a wide variety of gram positive and gram negative bacteria. Neomycin is nephrotoxic. It has been proved effective against tuberculosis in guinea pigs, although preliminary studies have not shown it to be superior to streptomycin.

Viomycin is another antibiotic which is of value in treating tuberculosis. However, owing to its potential toxicity it is only used when streptomycin and P.A.S. have failed.

Erythromycin is still another antibiotic from the soil. Its main use is in treating staphylococci, streptococci, pneumococci and organisms resistant to penicillin.

Carbomycin covers a field similar to that of Erythromycin, being principally active against gram positive

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bacteria, although it does possess activity against both Rickettsiae and large viruses.

When Should Antibiotics be Used in Combination?

The steady increase in the number of antibiotics that are therapeutically active presents the practising physician with a perplexing problem. If one antibiotic will do a good job, will two do a better one? This is a question which any doctor is likely to ask the pharmacist: Can I mix these antibiotics—are they synergistic or antagonistic?

Unfortunately, no sweeping statement can be made, but in general the bactericidal antibiotics such as Penicillin and Streptomycin are antagonistic to the broad spectrum antibiotics which are bacteriostatic.

In an attempt to be of some help in answering this problem I have compiled what I consider to be sound practice based on the result of clinical reports to date.

Penicillin Alone

When an organism is very sensitive to Penicillin there is no advantage in adding a second drug. Failure of clinical response is nearly always due to inadequate dosages. The more critical the illness, the more frequent and massive the dosage, up to a maximum of one million units of Crystalline Penicillin G two hourly.

Streptomycin Alone

Owing to the probable development of resistant strains, it is not desirable to use Streptomycin alone.

Chloramphenicol or Aureomycin or Terramycin alone

The choice of any particular one of these drugs rather than another depends on the sensitivity of the organisms concerned, which is unpredictable. There are good reports of the efficacy of each one of them.

Penicillin with Sulphonamides

The sulphonamides are bacteriostatic drugs which delay the bactericidal action of Penicillin. However, a vast amount of clinical experience has shown that the combination is compatible and often beneficial. It is the most useful combination for mixed infections with *Strep. pyogenes* and a coliform bacillus as in some puerperal infections, and is a good choice when either of these organisms may be the cause of an infection. Procaine Penicillin and soluble Sulphamezathine should not be mixed in the same syringe, as procaine inactivates sulphonamides.

Streptomycin with Sulphonamides

This is a useful combination, and may be successful in eradicating an infection which has been only arrested by sulphonamides—e.g. in the urinary tract.

Penicillin with Streptomycin and Sulphonamides

This combination is compatible and probably synergistic. It is suggested as the therapy of choice in serious acute infections such as purulent meningitis, when the identity of the organism is unknown and either cocci or bacilli may be involved.

Penicillin with Chloramphenicol or Aureomycin or Terramycin

The "Broad Spectrum Antibiotics" like the sulphonamides are bacteriostatic and delay the action of Penicillin. There is in addition some evidence, both experimental and clinical, of antagonism between them and Penicillin, leading to death of the animal or patient. However, combinations have been used on many occasions without apparent untoward effects. The position awaits clarification. Meanwhile it would seem wise, particularly in infections which themselves endanger life, to avoid combining these drugs with Penicillin.

Streptomycin with Chloramphenicol, Aureomycin or Terramycin

Since Streptomycin, like Penicillin, is a bactericidal drug, and the others (as well as the sulphonamides) are not, there may be some initial delay in the action of Streptomycin. However, combinations of each one of these drugs with Streptomycin have been used with a measure of success in the treatment of brucellosis, and are recommended in *H. influenza meningitis*. There appears to be no clinical contra-indication for any of these combinations, but they should be used with caution.

One example of the value of combining Streptomycin with Terramycin is in the treatment of tuberculosis. In this instance the development of resistance to streptomycin is retarded.

Chloramphenicol with Aureomycin or Terramycin and Sulphonamides

This combination should give adequate therapeutic cover in infections with gram positive or gram negative organisms, and might be preferred to Penicillin with Streptomycin and Sulphonamides in an infection probably arising from the bowel.

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"Black Magic" Barrett and His Text Book

By Frank A. King.

For twenty years, from 1778 until 1798, Lackington, the famous London bookseller and publisher, of Finsbury, issued various books, including a very curious work compiled by a certain Francis Barrett, F.R.C., who described himself as "Professor of Chemistry, Natural and Occult Philosophy, the Cabala, etc."

In his book, entitled "The Magus; or Celestial Intelligencer," the author not only covered every department of the Black Art, but also included several processes and prescriptions which he affirmed would cure or prevent certain diseases.

The book is divided into several sections. The first part contains spells, charms, conjurations, and talismen; and he gave a large number of recipes for the cure of diseases, some of which are as curious as they are objectionable.

In the next section the author deals with the art of fascination, and boasts of his ability to prevent thieves stealing property, to stop the march of an army, to prevent ships moving out of a harbour, to prevent water from flowing, to bind the earth so that it could not bring forth fruit, and even to bind lightnings and tempests so that these did not harm.

Another part deals with divination by means of stars and contains the principles of Constellating Practice, or Talismanic Magic. This is followed by a section of "Magnetism and Cabalistic Magic, discovering the secret mysteries of celestial magic, with the art of calculating the divine names of God." The section deals with the invocation of spirits, dreams, prophecy, miracles, etc.

The next section is entitled: "The Cabala; or the Secret Mysteries of Ceremonial Magic Illustrated." In it he reveals the role, government and order of the angels, intelligences, and blessed spirits, and has a number of rare figures used in the cabalistic art, with coloured portraits of Apollyon, Belial, Asmodeus, the Incubus, Ophis, the Spirit Antichrist, Astraroth, Abaddon and Mammon.

The steel engraving of the author, which forms the frontispiece of the volume, shows him to be a most commonplace-looking individual!

The next part is headed: "Of the Particular Composition of the Magical Circle, or exorcisms, benedictions, and the conjuration of every day in the week, and the manner of working described."

The last section of the book is composed of a series of biographies of the most eminent magicians and astrologers, such as Zoroaster, Trismigistus, Roger Bacon and others.

Here is one of his spells, which may have been much the same as those utilised by Queen Caroline, the unfortunate wife of George IV. of England, when she attempted to adopt Black Magic techniques against the "First Gentleman of Europe." Barrett says:

"If any one shall with an entire new knife cut asunder a lemon, using words expressive of hatred, contumely, or dislike against any individual, the absent party, though at an unlimited distance, feels a certain inexpressible and cutting anguish of the heart, together with a cold chilliness and failure throughout the body—likewise of living animals, if a live pigeon be cut through the heart, it causes the heart of the party intended to affect with a sudden failure; likewise fear is induced by suspending the magical image of a man by a single thread."

Here is one of his more simple prescriptions:

"The application of a hare's foot pulls out a thorn, and the toothache is cured with a stone that is in the head of a toad."

Barrett recommended toads to be used for a great many experiments, such as in his extremely simple cure for tuberculosis:

"If any one shall catch a living frog before sunrise, and he or she spits in the mouth of the frog, will be cured of an asthmatic consumption."

He also gives detailed instructions as to how the medicinal properties and virtues of the toad are best extracted:

"We must hang him up aloft in a chimney by the legs, and set under him a dish of yellow wax to receive whatsoever may come down or fall from his mouth. Let him hang in this position for three or four days—at least till he be dead. Now we must not omit frequently to be present in sight of the animal, so that his fears and inbred terror of us, with the ideas of strong hatred, may increase even unto death."

In a footnote Barrett assures his readers that he has tried the following experiment "on toads and other reptiles of his nature, and was satisfied of the truth of this." The test comes during a dissertation upon the peculiar virtues of toads and serpents, when he states:

"So great is the fear of the toad, that if he is placed directly before thee, and thou dost behold him with an intensive furious look, so that he cannot avoid thee, for a quarter of an hour, he dies, being fascinated with terror and astonishment."

He gives the following preservative amulet against the plague:

"In the month of July, in the decrease of the moon, I took old toads, whose eyes abounded with white worms hanging forth into black heads, so that both his eyes were totally formed of worms, perhaps fifty in number thickly compacted together, their heads hanging out, and as often as any of them attempted to get out, the toad, by applying his fore-foot, forbade its utterance. These toads being hung up, and made to vomit in the manner before mentioned, I reduce the insects and other matters ejected from the toad, with the waxen dish added thereto; and the dried carcase of the toad being reduced to powder, I formed the whole into troches with gum-dragon, which, being borne about the left breast, speedily drove away all contagion, and, being fast bound to the place affected, thoroughly drew out the poison."

Barrett gives a very curious piece of information in his section headed: "Serpent":

"Hippocrates, by the use of some parts of this animal, attained to himself divine honours."

He described numerous other remedies which required spiders, such as:

"Music is a well known specific for curing the bite of a tarantula, or any venomous spider; likewise water cures hydrophobia; warts are cured by paring off the same, or by burying as many pebbles secretly as the party has warts."

"If any one shall spit in the hand with which he struck or hurt another, so shall the wound be cured; likewise, if any one shall draw the halter wherewith a malefactor was slain across the throat of one who hath the quinsy, it certainly cures him in three days."

"Rape seeds sown with cursing and imprecations, grows the fairer and thrives; but if with praises, the reverse."

"The herb nip being heated in the hand, and afterwards you hold in the hand the hand of any other

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party, they shall never quit you so long as you retain that herb."

Dealing with charms, amulets and enchantments, he comments:

"The instrument of enchanters is a pure, loving, breathing spirit of the blood, whereby we bind or attract these beings we desire or delight in; so that by an earnest intention of the mind we take possession of the faculties in a no less potent manner than strong wines beguile the reason of those who drink them. Indeed, the virtue of man's words are so great, that when pronounced with a fervent consistency of mind, they are able to subvert Nature, to cause earthquakes, storms, tempests."

He then observes:

"I have in the country, by only speaking a few words, and used other things, caused terrible rains and claps of thunder."

He admits he is a little doubtful whether every reader will believe some of the things he related, but he introduces one charm with the following comment: "I will here set down a very powerful amulet for the stopping immediately of a bloody flux; for that which (with a faith) I dare lay down my life for the success and entire cure."

"An Amulet for Flux of Blood—In the blood of Adam arose death; in the blood of Christ, death is extinguished; in the same blood of Christ, O blood, I command that thou stop fluxing! Let the party who pronounces these words hold the other's hand."

He gives four cabalistic letters which, he says, if written on a piece of clean vellum, will be much more efficacious as a cure of ague, etc., than the word "Abracadabra."

In the chapter covering unctions, philtres, potions, etc., he says:

"There are some collyriums which make us see the images of spirits in the air or elsewhere; which I can make out of the gall of a man, and the eyes of a black cat, and some other things; and if a smooth, shining piece of steel be smeared over with the juice of mugwort, and be made to fume, it causes invoked spirits to appear."

Elsewhere in his first section he states:

"It is expedient for us to know that there are some things which retain virtue only while living, others even after death. So in the cholic, if a live duck be applied to the belly it takes away the pain, and the duck dies. If you take the heart out of any animal, and while it is warm, bind it to any one who has a quartan fever, it drives it away. So if any one shall swallow the heart of a lapwing, swallow, weasel, or a mole, while it is yet living and warm with natural heat, it improves his intellect, and helps him to remember, understand, and foretell things to come."

Later on he deals with the generation of animals by natural magic:

"Take a living crab, his legs being broken off, and be buried in the earth, a scorpion is produced. If a duck be dried into powder and put in water frogs are soon generated; but if he be baked in a pie, and cut in pieces, and be put in a moist place under the grounds, toads are generated. The hair of a horse's tail put into water receive life and are turned into a most pernicious worm."

Many country persons believed in this last superstition in some parts of Great Britain until the middle of the nineteenth century. Barrett continued:

"And there is an art wherewith a hen sitting upon eggs may be generated the form of a man, which I myself know how to so, and which magicians call the mandrake, and it hath wondrous virtues."

Rev. E. Cobham Brewer, LL.D., in his "Dictionary of Phrase and Fable" says that:

"The root of the mandrake, or madragora, often divides in two, and presents a rude appearance of a man. In ancient times human figures were cut out of the root, and wonderful virtues ascribed to them, such as the production of fecundity in women. (Genesis, xxx, 14-16.) It was also thought that mandrakes could not be uprooted without producing fatal effects, so a cord used to be fixed to the root, and round a dog's neck, and the dog being chased, drew out the mandrake and died. Another fallacy was that a small dose made a person vain of his beauty; and a large one made him an idiot; and yet another that when the mandrake is uprooted it utters a scream, in explanation of which, Thomas Newton, in his 'Herball to the Bible,' says: 'It is supposed to be a creature having life, engendered under the earth of the seed of some dead person put to death for murder.'"

Shakespeare, in "Romeo and Juliet" (Act IV, scene 3), says: "Shrieks like mandrakes, torn out of the earth."

In the second part of his book this Rosicrucian author gives what he thinks is "the true secret of the philosopher's stone, or Jewel of Alchemy, wherein the process of making the great elixir is discovered, by which base metals may be turned into pure gold, and discovering that valuable and secret medicine of the philosophers to make men healthy, wealthy, wise and happy."

There are ten preparatory lessons to be learned in order to qualify the student in search of this treasure. In these lessons purity of heart is inculcated, with freedom from hypocrisy, and requiring truth-loving lips, charity, mercifulness, piety, sobriety, and abstemiousness.

"We must not covet gold," he warns, "for to desire more than enough is to offend the Deity." (How much did he consider to be "enough"?)

And here is Barrett's recipe for making the Philosopher's Stone:

"The expense thou must be at will be but a trifle; all the instruments necessary are but three—viz., a crucible, an egg philosophical, and a retort with its receiver. Put your fine gold, in weight about 5 dwts., fill it up, put it into your philosophical egg, pour upon it the twice of its weight of the best Hungarian Mercury, close up with egg with an Hermetic seal, put it for three months in horse dung, take it out at the end of that time, and see what kind of a form thy gold and Mercury has assumed; take it out and pour on it half its weight of good spirit of sal ammon., set them in a pot full of sand over the fire in the retort, let them distil into a pure essence, add to one pt. of this Mercury two pts. of thy water of life, or "prima materia," put them into thy philosophical egg and set them into horse dung for another three months; then take them out and see what thou hast—a pure ethereal essence which is the living gold; pour this pure spiritual liquor upon a drachm of molten fine gold and you will find that which will satisfy thy hunger and thirst after this secret; for the increase of thy gold will seem to thee miraculous, as indeed it is. Take it to a jeweller or goldsmith; let them try it in thy presence, and thou wilt have reason to bless God for his mercy to thee."

Barrett's text-book seems to have summed up all that was then known about the Black Art, and should have enabled any eighteenth century student to call up spirits from the vast depths, to cure all and sundry, and to make a fortune for himself.

And if the student failed, then Barrett could always say that the selfish desires of the experimenter had upset the technique, even if the fellow followed out explicitly every minute detail of the elaborate and comprehensive instructions!

The Women's Section

Correspondent: Miss A. K. Anderson

Representatives of all branches of science are descending on Melbourne today for the A.N.Z.A.S. Conference, which (as I write) begins officially tomorrow, and we Victorian chemists are looking forward to meeting our friends from other States. Interesting symposia and papers are being given during both day and evening sessions, with the usual social functions fitted in between. By the look of things, we are to have an exhausting week!—especially those of us who have to be at our jobs as usual during the day.

THE WOMEN PHARMACEUTICAL CHEMISTS' ASSOCIATION OF VICTORIA

Our Association had its most successful meeting for some time on August 8, when we revived a feature we occasionally had some years ago—that of having a buffet dinner with an after-dinner guest speaker. Both the dinner idea and the guest speaker proved most popular. The Business and Professional Women's Club, where the dinner was held, was most comfortable and attractive, and everyone appreciated the informal and friendly atmosphere, not the least Miss Winifred Atwell and her publicity agent, Miss Stewart, who were our guests.

Miss Freda Smalley, our President, who was making her first appearance at a general meeting since her illness, and was given a warm welcome by all members, greeted the guests.

Introducing Miss Atwell, Miss Smalley said she was at last realising one of her ambitions—to have as guest speaker a woman pharmaceutical chemist from another country.

During her talk after dinner Miss Atwell told us of Pharmacy in Trinidad, where she was apprenticed to her father and qualified—about how she went to London to study to be a concert pianist—how she began broadcasting for the B.B.C., and became famous both as an entertainer and for her piano recordings. She told us about the life of a "star," which, in her case at least, is a tremendously busy one, as she believes that, as it is the public who have made her famous, she owes it to them to give as much pleasure as she can. Although Miss Atwell did not speak of this, we know how much time she gives to playing at hospitals, convalescent homes and for charities of all kinds. With two shows a day in the theatre, this all leaves her very little free time. All the 75 members present were charmed with Miss Atwell's friendly and natural manner and her sense of humour.

Miss Renee MacGillivray, who had met Miss Atwell in Sydney shortly after her arrival in Australia, proposed a vote of thanks to our guest of honour, which was seconded by Miss Brenda Oldham.

Judging by the comments of members after the departure of our guests, the meeting taking the form of a buffet dinner was a great success, and all are in favour of a repetition at an early date.

Our next meeting will be held at the College on Thursday, September 1, when I.C.I. will show us some films—one on one of the newer drugs and one a travel film.

On August 9 we held a successful theatre party at the Princess Theatre, where "The Little Hut" was enjoyed by 120 members and their friends.

THE ASSOCIATION OF WOMEN PHARMACEUTICAL CHEMISTS OF NEW SOUTH WALES

A representative gathering of members packed into the society rooms at "Science House" for the August meeting.

The Secretary, Miss Joy Latham, read the minutes of the July meeting.

The designs for a Federal badge were sent to Melbourne during the month, and it was unanimously decided to leave the final decision regarding this until the Federal Conference in Melbourne next May.

We were pleased to welcome a new member, Miss C. Eakin, and an old member, Miss Ann Bagnall, who has returned after spending 15 months in the United Kingdom and Europe.

All members were delighted to learn that a former member, Miss Pat Kelly (now Mrs. John Voss), had given birth to a baby boy on June 26.

This month our guest speaker was Miss Jean Dembicka, who gave us a very interesting talk on a subject to which many of us have never given a great deal of thought, and which proved extremely stimulating, i.e., New Education in Movement.

First of all, Miss Dembicka traced the History of Movement back to approximately 100 years ago. About that time Isadora Duncan started a revolution in movement by trying to discover the natural way people moved. She first tried to move without shoes or stockings, and eventually used a Grecian tunic to obtain free movement. This, however, had no influence on movement today.

Later a Frenchman, Francois Delsante, who became a teacher of music and singing at the Conservatoire of Paris, became interested in movement, and formulated the Law of Expression. He went out and studied the normal reactions of people and how they move and react in definite sets of circumstances. He also formulated the Law of Correspondence and Opposition, which says when one movement is done everything else should correspond. This has special application on the stage.

Later still, a Czechoslovakian, Rudolf Laban, used directions and dimensions in movement. His contribution was very important, particularly to the History of Ballet, because he first introduced dance notation. This meant that the dance steps of a whole ballet may be written down on paper in a similar manner to the way music is written. Today nobody knows how Swan Lake was first danced, but we know that performances today in any part of the world are all taken from the one "score."

Another prominent name in the History of Movement is Jacques Dalquonce, a Viennese, who tried to give one kind of possibility in the development of modern movement.

By now we may well be asking what is movement? The answer is that it is a feeling of a certain subject expressed in motion, and self-expression is the primary subject of movement. If movement is preformed to music, it has to be in time with the beats, otherwise it has its own rhythm. A dance, however, is a feeling or an emotion of a certain idea expressed in movement, and is the only art of which the human body is the instrument. Classical ballet is the highest and also the most artificial art, as no self-expression is involved.

The elements of movement are dynamic force, time, space (i.e., interval between points and objects), balance and poise. But these are not specially characteristic of modern movement. Teachers of modern

movement are trying to teach their pupils to interpret abstract things like the wind or moon spontaneously, and to give impromptu dances on these themes. This power of creativeness is an achievement of body control and a setting free of emotions—there must be no self-consciousness. Miss Dembicka then discussed the impact of modern movement on her pupils. She said it develops the powers of imagination, concentration, will power and presence of mind, which is most important in young children.

Miss Dembicka graciously consented to answer members' questions during supper.

Stop Press: A theatre party will be held at the Empire Theatre on September 16, to the Italian Opera Company's production of "Il Pagliacci" and "Cavalleria Rusticana." Tickets may be obtained from Mrs. J. Mathieson, 187 O'Sullivan road, Bellevue Hill. Phone FY3140.

THE WOMEN PHARMACEUTICAL CHEMISTS' ASSOCIATION OF SOUTH AUSTRALIA

On August 2 a committee meeting was held at the home of the President (Mrs. K. V. Read). General business was discussed first, after which suggestions for our Christmas celebrations this year were discussed. Plans for this will be announced later.

We are sorry to learn of the illness of one of our committee members, Miss Zeta Walsh; we send her our best wishes for a speedy recovery.

Our Social Fund is growing gradually, but there are still some members who have not co-operated in this matter. Each member has been asked to have a small party, when a charge of 2/6 is made for each guest, the money collected being donated to the Social Fund. We would appreciate the support of all members.

FOOT ABSCESS TREATMENT

Several outbreaks of foot abscess have occurred during recent wet weather in the Western District, reports Mr. W. J. Pryor, the Department of Agriculture's veterinary officer at Camperdown.

Lameness, heat and swelling are the signs by which affected feet may be recognised.

Foot abscess can be treated by paring the hoof back well. This allows the pus to be released on the sole, just behind the toe.

When an abscess is nearly ripe, it should be opened at its lowest point. Mr. Pryor says that it is doubtful whether the painting of antiseptics on the surface will help greatly.

Foot abscess is hard to control. It is best to keep all feet well pared, and to try and keep sheep off wet ground. Fortunately, more than 90 per cent. of cases heal without treatment, but affected sheep lose condition before recovering.—Department of Agriculture, Victoria (Bulletin No. 576, 23/8/55).

ALL SPRAYS ARE DANGEROUS

Parathion and H.E.T.P. are poisonous, and most orchardists treat them with the care they demand. But many other sprays not as deadly as these phosphorous compounds can cause injury of one sort or another.

According to officers of the Horticultural Division of the Victorian Department of Agriculture, ziram and thiram give some people a severe attack of dermatitis. D.D.T. and Dieldrin can cause paralysis if they are absorbed through the skin. There are recorded cases of sprayers inhaling nicotine sulphate spray, and suffering severe though not fatal poisoning.

Actually all sprays are dangerous if they are not handled with care.

They are particularly dangerous when they are in the concentrate form before mixing. Growers are advised not to inhale fumes or get concentrated dust or liquid splashed on their skin or face while opening containers and mixing up solutions.

The warnings on all cans and packages should be read and obeyed.—Department of Agriculture, Victoria (Bulletin No. 576, 23/8/55).



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New Books

CURRENT AFFAIRS BULLETIN

Current Affairs Bulletin—a 16-page booklet published by the University of Sydney—deals every fortnight with some important topic of national and international affairs.

The material it contains is expert and objective, and the Editor and his committee have complete freedom in choosing the topics and preparing them for publication. Its authors—local and overseas—are recognised authorities in their fields, and C.A.B. is prepared to take full responsibility for everything it publishes.

For further information, write to The Editor, Current Affairs Bulletin, Department of Tutorial Classes, University of Sydney, N.S.W.

Pharmazeutisches Wörterbuch, Carl Hunnius, 2nd ed., 1955, 610 pp., 16 tables, 80 illustr. (Walter de Gruyter & Co., Berlin, W.35, Genthiner Strasse 13.) Price D.M.18.40.

This "Pharmaceutical Dictionary" for German readers is designed, says the preface, "to give the practising pharmacist, as well as the student and apprentice, a concise handbook, which, nevertheless, covers the field of pharmacy and related callings, as fully as possible; something which has been lacking in recent pharmaceutical literature."

For its size the book is surprisingly comprehensive. We would call it an encyclopedia rather than a dictionary. It contains information which an English-speaking reader would not find between the covers of a single book, but would seek in "Martindale" textbooks of pharmaceuticals, pharmacognosy, botany, physiology and chemistry, medical dictionaries and The Merck Index. This is achieved by keeping most entries brief, using small print and systematic abbreviations. But descriptions of apparatus, e.g., the microscope, polarimeter and Westphal (S.G.) balance, are relatively lengthy and well illustrated.

Browsing through the book with an eye on newer substances, we find monographs on Achromycin (Tetracycline), Rutin (both separately and under "Vitamins"), A.C.T.H. (but the Armour Laboratories may not like the spelling "Amour"), Cortisone (320 words, dealing with discovery, sources, formula, uses and contraindications, dose, modes of administration and commercial sources). Triethanolamine is mentioned, but alginates get only a collective monograph of 42 words, dealing mainly with their industrial uses. Methyl-cellulose is adequately described. Typical percentage strengths are not given for emulgents, nor even for Salicylic Acid, but one finds them under Zinc Sulphate and Mercuric Chloride. Doses are usually quoted, even for the antibiotics. Vegetable drugs, with their many synonyms, are given much prominence. The botanical sources are also included separately. Roses and their medicinal products, to take one example, are treated more fully than in Trease's textbook.

Besides monographs on individual drugs, there are several on families of drugs, such as the sulphonamides, hormones and hypnotics, on chemical processes and technical terms, e.g., polarography, tautomerism, on biological and botanical terms, e.g., ganglia, motor nerves, Leishmaniasis, bacteria, leucicels. Even topics on the fringe of pharmacy, such as Radioactivity, are given prominence.

There are useful appendices on the treatment of poisoning, doses, units for bio-assay, colour reactions of alkaloids, indicators, atomic weights, the naming of organic compounds, removal of stains, urine analysis and a list of abbreviations in prescriptions. The appendix on weights and measures did not fare so well; the Imperial system of weights is very inaccurately set down. We were interested in a table of substances and their incompatibilities (stated as in the B.P.C.) and in

some remarks on dosage for children. Young's rule—Age

of adult dose—is rejected as giving too low a dose for young children, and the rule ($\text{Age} \times 4 + 20$)% of the adult dose suggested for children over one year old.

The book is attractively bound, and, in spite of a few errors, a valuable reference book for pharmacists and students. The appearance of a similar volume in English would undoubtedly be welcomed by the profession.—G.L.

HISTORY OF MORTARS

Address in Edinburgh

At a meeting of the Edinburgh and S.E. Scottish Branch in Edinburgh recently, Mr. A. W. Keith gave an address entitled "Mortars Through the Ages." He illustrated his talk with an exhibition of a number of mortars from his own collection. Below is a summary of the address.

Much of the information of the earliest mortars has been gained from carvings in Egypt, and most authorities agree that the first mortars were to be found in that country. The external shape of Egyptian mortars persisted until composition mortars were produced many centuries later.

The use of mortars spread from Egypt along the North African coast to Spain, and it also reached Europe via Syria, Turkey, Greece and Italy. The first European mortars are in "Gothic" style, and are of two varieties, one being characterised by ribs ascending from the bottom and gradually tapering towards the top, and the other, much rarer, by rings surrounding the mortar. The Roman "handmill" was a metal mortar equipped with a tight-fitting metal lid through a hole in the centre of which the pestle was introduced. During the Roman occupation of Britain, mortar factories ("mortaria") were established in the south of the country, and made mortars of white clay, baked hard to avoid porosity. Some were exported to Gaul and Rome.

The oldest metal mortars are hemispherical or pear-shaped, their shape and decoration being based on that of their stone predecessors. They include Egyptian examples, some of which were made of bronze inlaid with silver. The early Arabian mortars gave their shape to subsequent Gothic, Italian and French types. Spanish and Portuguese mortars, however, are invariably squat, possess vertical ribs or buttresses, but no handgrips or ears. Many of the mortars of the Renaissance period show the influence of the famous sculptors of the time such as Donatello, Benvenuto Cellini and others. English mortars are less decorative than their Continental counterparts.

From about the 13th century the mortar came to be used as a sign outside "druggists' shops." In Germany there grew the custom of having large and usually ornate mortars within druggists' establishments as decorations. They were placed on large plinths or wooden pedestals usually finely carved.

Since the Renaissance, Dutch and Flemish mortars especially show a wealth of elaborate and delicate decoration. Invariably they have some inscription in Latin or Low Dutch, and their decorations include Acanthus leaves, cluster of fruits (grapes being common), circular shields, birds of prey, flowers with birds and similar symbols.

"Bell" mortars were made by bell-makers of the 15th, 16th and 17th centuries, among whom the English, Dutch and Flemish were the most skilled. It can be assumed that the mortars were made usually from some of the metal left over after the manufacture of a carillon of bells. Mortars were then essential pieces of domestic equipment, and they still are in parts of Europe. In Holland, Belgium and Germany, mortars used to be highly prized, and were frequently given as wedding gifts, often with the names of initials of the contracting parties inscribed on them.—"The Pharmaceutical Journal."

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Overseas News

GREAT BRITAIN

London, August 5, 1955.

Australians at Council Meeting

At the August meeting of the Council of the Pharmaceutical Society the President, Mr. H. Steinman, welcomed as visitors two prominent Australian pharmacists—Mr. J. H. Gould, of Hobart, and Mr. H. H. Richmond, of Melbourne. The President said that Mr. Gould had a wide knowledge of the practice of pharmacy, and because of his long experience and service he was known as the father of Tasmanian pharmacy. Mr. Richmond had an excellent record of service in the private practice of pharmacy in Melbourne.

Poison Law Changes

The Order in Council, foreshadowed in last month's Newsletter, making methylpentynol a scheduled poison, has now been made. This product is sold in at least three proprietary forms in Great Britain.

The Home Office has given warning that all the amphetamines will be placed in Schedule IV, which means that they will only be obtainable on doctors' prescription.

Master of Pharmacy Degree

The senate of the University of London has resolved that from July next examinations will be held for the degree of Master of Pharmacy (M.Pharm.) for internal students.

Monopolies and Parliament

The report of the Monopolies Commission, outlined in last month's Newsletter, has been debated in Parliament and welcomed as a basis on which the Government can formulate proposals. Broadly speaking, the Government intend to adopt the minority view that restrictive practices should be registered. Mr. Thorneycroft, President of the Board of Trade, during his speech, said that he believed that the sensible course was not to declare resale price maintenance to be illegal nor to abolish it fortuitously by the removal of all existing methods of enforcement, but that the right course was to examine urgently whether some other method could not be devised for maintaining prices individually fixed, taking price-cutters where necessary to the courts in the last resource, which was certainly less open to criticism than the network of practices to which the report referred.

Mr. Thorneycroft concluded by stating "quite shortly and categorically" what the Government proposed to do. They intended to take power by Act of Parliament to require the registration of those restrictive practices which would be specified from time to time. On the other hand, they would not limit themselves to those referred to in the report, nor, on the other hand, would they require all restrictive practices to be registered together. They would select the ones they wanted and in the order they wanted. That was the Swedish system which had met with considerable success. They would include in the practices for early registration those referred to in the report, and they would also think it appropriate to include at an early stage the agreements fixing common prices. With regard to those practices referred to in the report, once the registration authority had called forward for registration any particular class

of agreement, if the firms wished to operate or to continue to operate an agreement in this class they must register. Then a tribunal, with the information that the register made available, would call upon them by a given date to come forward and make out their case for employing that particular practice.

There would be two stages. First, there was registration, when all agreements of a specified class would be registered and any firm wishing to operate such an agreement would be able to do so only if that agreement had, in fact, been registered. The second stage was examination and judgment, when the tribunal would select agreements for examination and specify the date and place of hearing at which agreements would have to be justified if they were to continue. These practices in one form or another were all practices in restraint of trade, and as such they were of their nature liable at any rate to operate against the public interest. The answer seemed to him not to declare them crimes or fix an arbitrary date at which all practices must stop which would not be kept—as there must be some procedure for exceptions—but to place the onus of showing that they were in the public interest in a particular case fairly and squarely on the shoulders of the men who wished to use them.

The applicant, would, therefore, argue his case in front of the tribunal. If it decided in favour of the applicant he could go on, subject, of course, to any conditions or modifications that might be laid down, but if it decided against him then the practice must stop. An arrangement of this kind had some advantages over the views of the majority report. While it placed the onus where it should lie, it kept control over the timing and direction of the advance firmly in one's own hand. The work could, in the first instance, be concentrated where it is most desired.

P.A.T.A. Activity

Mr. H. E. Chapman, M.P.S., Barrister-at-Law, Secretary of the Proprietary Articles Trade Association, which has been in existence for nearly sixty years, in an article in "The Pharmaceutical Journal," concludes that it may reasonably be drawn from the Government's pronouncements that under the anticipated procedure the P.A.T.A., with manufacturer, wholesale and retail membership unimpaired, should be able to operate an effective method of price protection—either by existing means or by an alternative system to be provided for in the new legislation.

Advice from the U.S.

During July Dr. John Dargavel, executive secretary of the National Association of Retail Druggists in the United States, and chairman of the Bureau of Education on Fair Trade, visited Britain at the invitation of the Proprietary Articles Trade Association, and addressed members of the Fair Prices Defence Committee. At a press conference he stated that a study had shown that during the years 1939 to 1947, the average increase in prices had been 60 per cent., whereas the prices of 7000 articles sold under fair trade conditions by druggists had increased only 3 per cent. Statute law in the U.S. removed from the reach of the anti-trust acts price maintenance contracts between manufacturer and distributor, if they were made under the terms of the fair trade laws. This legislation had resulted from a price war which began in 1951. Prices were slashed to bankruptcy levels and well-known brands were retailed for less than their container cost. Tooth paste, normally selling at 50 cents, was advertised for 7 cents, and a well-known brand of aspirin valued at 59 cents had fallen to 3½ cents. Small retailers were driven to the edge of ruin. The Senate investigated the situation and had pointed out the fallacy of the "loss-leader" selling technique. Legis-

lation had followed. Dr. Dargavel said that, if a trader sold branded goods below the specified price, the Court would grant an injunction restraining him from continuing and a breach of the injunction would be treated as contempt of court.

Colouring of Tablets

An enquiry is to be conducted into the colouring of tablets, as the British Pharmacopoeia Commission is considering whether the practice of adding such agents should be recognised. An invitation has been extended to the Pharmaceutical Society, the National Pharmaceutical Union and the Association of British Pharmaceutical Industry to discuss the matter during September. The N.H.S. Drug Tariff lists ten tablets and one pill which may have a coloured coating. Standardisation would be greatly appreciated by the retail pharmacist who is sometimes wrongfully accused of an error in dispensing because he supplies a white tablet, whereas the patient had a pink tablet from a neighbouring chemist on the previous prescription and the doctor had told the patient to continue with the treatment.

Poliomyelitis Vaccine Unsafe

It now appears that trials will be abandoned on the Salk vaccine against poliomyelitis. Dr. G. S. Wilson, Director of the Public Health Laboratory Service, told a meeting of the National Fund for Poliomyelitis Research that in view of pitfalls in manufacturing the vaccine, they did not feel justified in using it in children here. This statement, which was given wide publicity, caused some misunderstanding and the Ministry of Health put out an official statement saying that research was going on on modifications of the Salk type vaccine, and it was to the original form that Dr. Wilson had referred.

Dental Bill Proposals

The Dentists' Bill has been introduced by the Ministry of Health into Parliament. This Bill proposes to establish an independent General Dental Council, so that the profession would become entirely self-governing. At present the Dental Board is controlled in some respects by the General Medical Council. The proposed Council would consist of 41 members and would include seven Crown nominees and six members appointed by the General Medical Council. A Disciplinary Committee of the Council would be empowered to determine whether a dentist's name should be erased from the register if convicted of crime or found guilty of infamous or disgraceful conduct in a professional respect.

It is also proposed to give power to the Council to make regulations to establish classes of ancillary dental workers. Oral hygienists, who have already been trained to scale, clean and polish teeth in welfare and school clinics, would be allowed to work in private practice under qualified supervision. A new class, who would be allowed to extract first teeth and to fill first and permanent teeth, would be trained. This training would probably follow the lines at present permitted in New Zealand. The Bill also seeks to restrict the right of lay persons to carry on the business of dentistry through employment of registered dentists.

More About Heroin

The B.M.A.'s fight against the ban on heroin, mentioned in recent Newsletters, continues. A deputation met the Home Secretary (Major Gwilym Lloyd-George), the Minister of Health (Mr. Iain Macleod) and the Joint Parliamentary Under-Secretary of State for Scotland (Mr. J. N. Browne), when the Association's case was put. It was asserted that the Government could not claim to have ascertained the views of the medical profession

before arriving at its decision, since the Association had not been consulted. The Home Secretary, in the course of his reply, pointed out that a number of representative bodies had been consulted over a period of four years, and an article in "The British Medical Journal," which foreshadowed the ban, brought only one letter of protest. He thought that there had been some misunderstanding about the reasons for the proposal to ban heroin. It was not related to the domestic problem, but to the need for an international effort to mitigate the heroin problem. To permit the manufacture of heroin in this country, but to prohibit export would not comply with the Economic and Social Council's resolution. If the manufacture of heroin were to be permitted in this country on the ground that its use was indispensable in the relief of suffering (which was contrary to the advice the Government had received) it would be difficult to prohibit the export of the drug, for example, to the colonies. In conclusion, the Home Secretary promised to consider the representations in consultation with the Minister of Health and the Secretary of State for Scotland.

Salary Increases

Agreements has been reached on increases in the minimum rates of salaries paid to pharmacists and dispensing assistants. Pharmacists, acting as managers, will receive increases of 21/- per week where the turnover does not exceed £100 weekly, 25/- where the turnover is between £100 and £300, and 30/- per week where the turnover is in excess of £300. Pharmacists who are not managers, will receive an increase of 20/- per week. Unqualified assistants engaged in dispensing will receive from 10/- to 12/- per week and females, similarly engaged, 8/- per week.

Conference Plans

The plans for the Conference at Aberdeen have reached their final stage and the shape of the International Pharmaceutical Federation Assembly in London is becoming clearer. By mid-July 650 delegates from 34 countries had been registered. The largest number, 130, is from France, with Germany next with 66, Austria and Sweden with 36 each and the U.S.A. with 32 representatives. Other countries which will be represented include: Australia, Belgium, Canada, Chile, Cuba, Denmark, Egypt, Finland, Greece, Holland, India, Italy, Iraq, Israel, Japan, Lebanon, Luxembourg, Malaya, Northern Ireland, Norway, Peru, Philippines, Spain, Switzerland, Tunisia, Turkey, the U.S.S.R. and Yugoslavia.

Fight Against Tuberculosis

The struggle against tuberculosis goes on, and recently the fourth Commonwealth Conference on Health and Tuberculosis was held in London. At the session on the choice of drugs, Professor W. McDermott, of Cornell University, New York, said that today it was possible to deliver to the tuberculosis patient in his home far more potent "anti-tuberculosis influences" than were available in the best sanatorium a decade ago. In the chemotherapy of tuberculosis no drug or combination of drugs was eradicated, and all of the drugs must be given for a long time. All lost their effectiveness gradually in the presence of unhealed lesions. He criticised the fact that no comparative tests had been made of isoniazid when given alone over a long period. That drug, he claimed, was prejudged on the basis of test-tube tests, and the opinion had been fostered that it must not be given alone for more than about 90 days. He suggested that the Medical Research Council, or the United States Public Health Service, or the U.S. Veterans' Administration should conduct a trial to demonstrate whether isoniazid-p-aminosalicylic acid combinations were sufficiently better than isoniazid alone to outweigh the disadvantages associated with P.A.S.

NEW CORTISONE DERIVATIVE

DeCORTISYL

PREDNISONE ★



SUPERIOR THERAPEUTIC EFFECT

DeCORTISYL is four times more potent than cortisone, and in addition clinically it appears to possess "qualitatively" superior therapeutic properties. Indeed, with equivalent dosage (one quarter that of cortisone), the anti-inflammatory, anti-allergic and anti-rheumatic power of DeCORTISYL allows much greater clinical control: thus DeCORTISYL is particularly spectacular in cases in which the therapeutic response to cortisone, in full doses, is inadequate.

REDUCED SIDE EFFECTS

DeCORTISYL causes little or no sodium and water retention or potassium loss. So an increase in DeCORTISYL dosage is not followed by oedema and a rise in blood pressure. Hence, no salt restriction and potassium administration are necessary. As with cortisone, periodic X-rays for possible peptic ulcer and prophylactic "... routine co-administration of an aluminium hydroxide gel" are advisable (Bunim 1955).

Average daily dosage: Initial 20-30 mg. Maintenance 5-20 mg.

DeCortisyl is presented in 5 mg. tablets, in bottles of 30.

★ Formerly known as metacortandracin

ROUSSEL LABORATORIES LTD. LONDON, N.W.10

Sole Distributors for Australia:

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Promotion of Photography in the Pharmacy

Sixth Article

What to Stock in 2½ x 3½

German made 2½ x 3½ in. cameras use 120 film and take 8 exposures, whilst Kodak cameras of similar size use 620 film and take 8 exposures. However, some German cameras through inlaid or inbuilt masking device in addition take 12 exposures of 2½ in. sq. size or 16 exposures of 1½ x 2½ in. size. When such small cuts are used on a camera taking 120 film, the 10½ c.m. lens, which is standard for 2½ x 3½ in. cameras, will act to a certain extent as a tele lens. However, the result will not give a true telescopic lens effect, as the perspective of a true telescopic lens is slightly different to that of simply having a longer focal length lens than what would be normal for the actual size of the negative.

The purpose of the provision to take negatives smaller in size than 2½ x 3½ in. is important firstly, because of saving in operating costs and secondly, if the photographer desires to take busts only, there is no waste of film. Since colour films are available in 120 size, however, the importance of the smaller size cuts is more prominent, because projectors are made for either standard 35 m.m. or 2½ in. sq. colour pictures, but no projector is made for full 2½ x 3½ in. size or for the 16 exposures on 120 film which result in a size of 1½ x 2½ in. sq.

As most amateurs nowadays want to have at least the possibility of taking colour shots, they are well advised to buy a folding camera which can take both 8 and 12 pictures per roll of film. This need is catered for in the Norca Folding Cameras made by Carl Braun of Nurnberg. These cameras are not only versatile in this respect, but are also very reasonably priced.

2½ x 3½ in. cameras are all of folding type with bellows, and the provision of bellows in this size is unavoidable due to technical reasons. A big disadvantage in 2½ x 3½ in. cameras is that the front suspension is carried by two rivets which, as they are made of soft metal, are subject to wear, and thus the front suspension gets out of parallel compared with the plane of the negative material. However, this disadvantage has been completely overcome in the Carl Braun Folding Cameras.

As we were serious in our intention not to use this series of articles as an advertisement for our products, we tender our apologies for stressing the features of the Norca in this article. Before leaving the subject, however, we would comment that the full importance of the front suspension is clearly set out in our Catalogue, pages 9-10, which we shall be pleased to supply on application.

Regarding stocks to be carried, the maximum retail price limit at which folding cameras can be freely sold is approximately £15. It has been found that once a customer is prepared to go higher than this figure, he will or he should prefer to buy either a straight-out 2½ in. sq. camera or a 35 m.m.

Of course, there are on the market some higher class roll film cameras with coupled rangefinder, etc., as well as plate cameras, such as Makina, Linhof and Bertram, but the plate cameras only appeal to very enthusiastic amateurs and are mainly designed for professionals.

IN SUBSEQUENT ISSUES:

Maintenance of Cameras
What to stock in Accessories
Principles of Advice to Customer

Inserted in the interests of
Pharmacists by Photimport
Pty. Ltd., Melbourne.

PHOTIMPORT PTY. LTD.

MELBOURNE: 18 Smith Street, Collingwood ———— JA 3571
SYDNEY: 19 York Street ———— BX 2216
PERTH: C/o Geoff Martin & Son, 83 Brisbane Street ———— BF 1791
Queensland Distributor: Gradwell Bros., 99 Edward Street, Brisbane B 3695
S.A. Distributor: Arthur Searcy & Son Ltd., 138 Grote St., Adelaide LA 2091

THE BIG THREE

PHOTIMPORT is the Company
PAXETTE is the Camera
PAXIMAT is the Projector



For the Pharmacist who is interested in regular turnover and reasonably high profit, this combination will give just that.

The Company gives sales advice, guarantees its goods and will supply blocks for advertising if required and warranted. With the PAXETTE you have a tried and tested 35 m.m. camera of world renown. Guaranteed for 1 year and backed by a factory which has manufactured over 1,000,000 of these cameras in six years, you have the best available in the miniature field.

The PAXIMAT completes the trio. A new automatic 35 m.m. projector of integral design gives sparkling results from colour transparencies. You load the magazine with up to 36 slides of any type, insert into the projector and project! Simple to use, small in size and reasonable in price.

A phone call or postcard will bring you more details of:—

PAXETTE - the Camera
PAXIMAT - the Projector
PHOTIMPORT - the Company

and the 29 CAMERA MODELS,
plus LARGE RANGE OF ACCESSORIES
made by Carl Braun of Nurnberg.

P.S.—Buy Best—Buy Braun

Professor E. Bernhard of Paris said that the success of chemotherapy in tuberculosis had outmoded pneumothorax procedures, and that 9 out of 10 cases of pulmonary tuberculosis of recent origin could be treated successfully by drugs and rest. The medicament he preferred was a combination of isoniazid and P.A.S.

Dr. M. I. Conalty, of the Laboratories of the Medical Research Council of Ireland, described a new compound that, he said, possessed antituberculosis activity. He and his colleagues had been led to its elaboration by the observation that isoniazid-resistant strains of the tubercle bacillus were more susceptible to amithiozone (a thiosemicarbazone) than isoniazid-sensitive organisms. The toxicity of thiosemicarbazones, however, had been a bar to their widespread use. By condensing equimolar proportions of isoniazid and p-aminobenzalthiosemicarbazone with periodate-oxidised starch, a mixed polymer had been produced, to which the name "hinconstarch" had been given. In laboratory animals the compound had high activity against isoniazid-sensitive and isoniazid-resistant bacilli and was of low toxicity. Dr. B. O'Brien, of the Meath Hospital, Dublin, said that the results of a small pilot clinic trial with "hinconstarch" conducted at his hospital had proved that the drug was worthy of a more extensive test. Nine patients had taken the drug for three months, and sputum had been rendered negative in seven of the cases. Up to about 2000 mgm. a day was tolerated without trouble, and no serious toxic effects had been noticed in any patient.

It is understood that in Great Britain the demand for beds for tuberculosis patients has fallen greatly and there is now practically no waiting time at all. As a consequence it is expected that some of the beds in general hospitals, which have been used with patients for tuberculosis, will be returned to the normal use and as many patients as possible treated in sanatoria, where the full range of treatment can be given.

An Unusual Appeal

The British Medical Association has made a request that all houses in streets and roads should be numbered, as the practice of giving a house a name only often leads to difficulty. When a doctor is called out at night, he may be unable to find the house if he is visiting a patient for the first time. The practice of giving names to houses is widespread in Britain and arose in many cases before building was in a continuous line along the thoroughfare. Great ingenuity has been shown by owners in finding distinctive names. In Scotland such house names appear as "Niaroo" which, when read backwards, has a meaning in the vernacular, although it does not necessarily imply that all the instalments have been paid! The housing situation is the subject of comment in "Dunroamin," but these flights of fancy do not help the harassed practitioner.

Costs in Hospitals

For almost two years an investigation has been going on on methods of costing in hospitals to enable the work to be placed on a proper accountancy basis. The Working Party, which has now issued its report, examined at considerable length possible bases for allocating expenditure on drugs among in-patients, out-patients and the medical service departments. The successful carrying out of any scheme for distributing drug costs is largely dependent on the co-operation of pharmacists and the Working Party had constantly in mind the necessity for keeping to the minimum possible the additional burden which might fall on pharmacists as the result of any scheme which they recommended. They came to the conclusion that it would not be desirable to lay down too rigid a system for pricing drugs, but that they should recommend alternative systems, leaving hospitals free to adopt the one more suited to local circumstances. It is considered that there would be no great difficulty in most hospitals in determining, from priced requisitions, the allocations to be made to the medical service departments.

Trade Notes

HELMEZINE: PRICE CORRECTION

Copy supplied for the "Helmezzine" announcement of Allen & Hanburys (A'asia) Ltd. on the front cover of our issue of July 30 contained an incorrect price of 30/- per dozen wholesale for the 1-oz. size. The correct price is 26/- per dozen.

B.D.H.

The British Drug Houses (Australia, Pty.) Ltd., Sydney, advises that as from August 8 its list prices for Streptomycin Sulphate and Dihydrostreptomycin Sulphate are reduced to 2/6 per 1 gramme vial.

Also the company now has available Hydrocortisone. Tablets in bottles of 25 x 20 mg., at a list price of 75/- per bottle.

BAYER DISTRIBUTION ARRANGEMENTS

We have been informed by Bayer Pharma Pty. Ltd., of Sydney, that from August 26 distribution of Bayer Pharma Pty. Ltd. ethical products and Bayer's Aspirin will be made throughout Australia by Salmund & Spraggon (Aust.) Pty. Ltd., 104 Mount Street, North Sydney, and its Interstate branches at 77 City Road, South Melbourne; 134 Waymouth Street, Adelaide; 168 St. George's Terrace, Perth; and 495 Adelaide Street, Brisbane.

A NEW CORTISONE DERIVATIVE

Roussel Laboratories Ltd., London, announces the introduction of DeCortisyl (Prednisone, formerly known as metacortandracin).

The manufacturer informs us that this new derivative of cortisone is characterised by maximal anti-inflammatory and anti-rheumatic effects with minimal sodium retention.

DeCortisyl is presented in 5 mg. tablets, bottles of thirty, and is available from Fassett & Johnson Ltd., either at 36-40 Chalmers Street, Sydney, or Commerce House, Flinders Street, Melbourne.

FACTS ABOUT "4711"

To help chemists answer customers' questions, the 4711 Eau de Cologne firm has just published a small folder called "Here are Facts About 4711."

It is a bright little affair of handy size and set out in the form of a quiz, with replies to such questions as the origin of the famous number, how old is the 4711 firm, why the name "Kölnisch" is used for its Blue and Gold Eau de Cologne, and how the products should be used. There are also hints on how the chemist should keep his stock so that it is always in good condition.

Anyone who has not received copies of the folder should write for them to the Australian distributor, Robert Blau (Australia) Pty. Ltd., G.P.O. Box 4711, Sydney.

NEW WYETH LABORATORIES OPENED

On July 15 his Worship the Mayor of Parramatta, Alderman H. V. Horwood, officially opened the new Wyeth International Limited Laboratories at Cliff Street, Parramatta.

Mr. E. S. Gregory, Australasian general manager of the Wyeth International Limited Company, welcomed the guests, who included Alderman Eric Mobbs, ex-Mayor of Parramatta, and Mr. E. S. Jameson, deputy town clerk, as well as Mr. Eric Nicholls, architect, and representatives of companies associated with Wyeth International.

In his opening speech Mr. Gregory said: "The opening day coincides with our 26th anniversary in this country. We originally started off manufacturing one product in very small premises. These new pharmaceutical laboratories cover one acre, and with new and latest facilities will continue in a much larger measure to make available the most effective ethical drugs provided by modern pharmaceutical research."

He thanked the Mayor and his Council for the ex-

cellent co-operation Wyeth had received from them to enable the project to be undertaken.

The Mayor said that his council was happy to have this new manufacturing plant and laboratories in the district of Parramatta, and thanked the company for the gift made to the Parramatta Council of the historical old home "Firholme" and its grounds, which was part of the Wyeth property.

"Firholme" was built by Captain John Macarthur in the early 1800's for the French school teacher he brought out for his children. Both the house and the original adjacent school are still standing. This pro-



From left to right: Mr. Eric Nicholls, Architect; Mr. E. S. Jameson, Town Clerk of Parramatta; Mr. E. S. Gregory, Australasian General Manager of the Wyeth International Limited; His Worship the Mayor, Alderman Horwood; and Alderman Eric Mobbs, Ex-Mayor of Parramatta.

perty, with its glorious old shady trees, is to be preserved as an historical reserve.

After the Mayor had cut the ribbon and officially opened the Wyeth plant, executives of the company escorted groups of guests through the building, which is attracting interest overseas because of its unique construction.

(A description and illustration were published in our issue of June 30, 1955, p. 674.—Ed.)

At noon the guests left for the Pennant Hills Golf House, where they were entertained to a buffet luncheon. Mr. Gregory presented the Mayor with a handsome desk set to commemorate the occasion.

BRITISH COMMONWEALTH ANTARCTIC EXPEDITION

Evans Medical Australia (Pty.) Ltd. informs us that advice has been received from its Head Office in England that the company has been entrusted with the provision of all the medical supplies for the U.K. parties for two years.

The project is for an advance party to leave in November in a specially chartered sealer for Grahamland (south of the Falkland Isles), where during their summer it is possible for a small ship to get through the ice during a brief period. The advance party will make a base, and will construct and stock an advance camp 300 miles on the way to the South Pole. Having achieved this, the party will wait until the main party of 15 arrives a year later, when the ice permits. The main party will then proceed towards the advance camp and the advance party will sail off in the ship.

The main party have deliberately chosen the long way to the South Pole, totalling some 1200 miles, as the crow flies, leaving a further 600 miles to reach the New Zealand coast of Antarctica, in Queen Alexandra Land, off the Ross Sea (this was the short route used by Scott and Amundsen in 1911).

Since the party will have exhausted their supplies, Sir Edmund Hillary, of Mount Everest fame, is leading a

party from New Zealand to set up a camp 300 miles from the sea, so that the main party may pick up supplies for the last 300 miles. A clearer picture of the magnitude of the undertaking may be gained when it is realised that Antarctica is a plateau 10,000 ft. up, rising, it is believed, to 16,000 ft. The temperatures are fantastically low. The party is taking two snow tractors, but in case they fail, they are taking five teams of huskies; they are also taking a plane equipped with skis in the hope that it can operate and save the party from long detours.

For this sort of venture every item has to be specially tested and packed to allow for cold and damp, and yet be as light as possible. Captain Scott took lime juice supplied by Evans to the South Pole 44 years ago. Once again Evans are assisting such an important venture.

The Merseyside Himalayan Expedition has now sailed from India, having climbed 19 peaks without any casualties. In a preliminary we have been informed that "the packing of the medical stores was completely satisfactory, and was better than for any other item."

P.A.T.A. OF NEW SOUTH WALES

Notified 22/8/55—

General Section: Additions

Whitehall Pharmacal Company—

Size	Retail		
Tube	5/-	Infrarub	40/- doz.
Tube	5/6	Preparation H	44/- doz.

Chemists' Section: Additions

Wyeth International Limited—

1.4 gm.	18/3	Thiomerin	13/8 ea.
	7/7	Wydase	68/- doz.

General Section: Alterations

Hillcastle Pty. Ltd.—

7/6	Inecto—"Rapid" "Ordinary,"	
	"Four in One"	53/- doz.

Chemists' Section: Alterations

Bristol-Myers Co. Pty. Ltd.

Ipana Tooth Paste—

Medium	1/8	Regular	13/3 doz.
		3 doz. lots	12/5 doz.
Large	2/7	Regular	20/4 doz.
		3 doz. lots	18/1 doz.
Economy	3/7	Regular	27/7 doz.
		3 doz. lots	25/3 doz.
Medium	1/9	Chlorophyll	14/- doz.
		3 doz. lots	13/- doz.
Large	2/9	Chlorophyll	22/- doz.
		3 doz. lots	19/7 doz.
Economy	3/9	Chlorophyll	30/- doz.
		3 doz. lots	27/6 doz.

PRESCRIPTION PROPRIETARIES CARD SERVICE

The 15 cards to be issued shortly for the month of August, 1955, will deal with the following products:—

A : 99	Adrenoxyl.
B : 57	Bidormal.
B : 58	B-PAS (Aminacyl brand).
C : 108	Calcium Gluconate and Ascorbic Acid (A. & H.).
C : 109	Cellulone.
D : 68	Dexedrine Plus.
E : 50	Ergotafene Tablets.
M : 56	Linctus Morphodine.
N : 54	Neutratabs.
N : 55	Nufer.
P : 136	Prominal Compound.
P : 137	Pruvoral Pastilles.
R : 23	Reserpal Tablets.
R : 24	Reserpin (Andrews).
R : 25	Rauwolfia (Andrews).

Subscription (£3/3/-) to the P.P. Card Service for 1955, (including the new Index Book) may be entered at any time. Renewals or new subscriptions, accompanied by cheque, should be addressed to The Manager, "The Australasian Journal of Pharmacy," 24 St. Francis street, Melbourne.

A few sets of the 1954 cards (£3/3/- per set) are on hand. We regret that the cards of earlier years—1951, 1952 and 1953—are now out of print.



MORE AND **MORE** CUSTOMERS
WILL BE ASKING YOU FOR . . .

PETAL Soft



**WITH COTTON WOOL SOFTNESS
AND DOUBLE-PLY STRENGTH**

. . . Carnation Toilet Tissue is ideal for babies—
for children—for mothers—for those with delicate
skin. It's Australia's really soft toilet tissue.

COMPLETELY WRAPPED FOR EXTRA PROTECTION

ORDER NOW, from any wholesaler throughout Australia

Proprietors: Muir & Neil Pty. Ltd., Sydney and Melbourne.
Brisbane Dept.: 329 Adelaide Street.

CARNATION *Toilet Tissue*

PENICILLIN

GLAXO

The name of *GLAXO* has been inseparably linked with penicillin and streptomycin since their introduction. Careful control during manufacture and years of research have made it synonymous with purity and potency.

The wide range of Glaxo presentations of these antibiotics, either separately or in combination, provides adequate means to combat most infections.

When ordering penicillin or streptomycin ensure that you receive the highest quality by adding the suffix *GLAXO*.

STREPTOMYCIN

GLAXO

GLAXO LABORATORIES (AUST.) PTY. LTD., MELBOURNE AND SYDNEY

Student Activities

SYDNEY UNIVERSITY PHARMACEUTICAL ASSOCIATION

July marked the end of second term in Sydney, and once again we had a fairly busy month. At the last committee meeting, held on July 8 in the Materia Medica Museum, final numbers and a financial statement for the Annual Ball, held on July 1, were presented. Altogether, including official guests, 276 attended, and with a few extra expenses not yet accounted for a fairly substantial surplus was shown. So that the slight increase in the price of the tickets paid dividends in the long run, since it enabled us to hire a larger orchestra and make a much bigger success of it than last year.

We were very pleased to have Queenslander Ron Snell, Secretary of the National Union, to see a few of the workings of S.U.P.A., and introduce him to some of the N.S.W. people he will be meeting at Congress next year, when he made a brief visit early in the month. He was fortunately able to come along to the last committee meeting, and on the Saturday night we had an evening of Congress slides at Rhonnda Figgis' home. This was another very enjoyable Congress Reunion, and we are indeed grateful to Mr. and Mrs. Figgis and Rhonnda for making their home available once again and for a wonderful night's entertainment. As well as Congress slides, we saw a few taken on their trip to Ceylon and a few shots of Sydney, including the University, and the Blue Mountains. After supper we were once again entertained by Neil Steffenson at the piano with a few of the traditional songs—a fine ending to a thoroughly enjoyable evening.

Other business arising at the last committee meeting was, firstly, a letter from B.W.'s, advising us that a book on Pharmacology and Physiology, which we inquired about some time ago, is now available.

Very regretfully, in view of his past services to S.U.P.A., the committee accepted the resignation of Harold Menson as Student Vice-President and 2nd year rep. Unfortunately, the pressure of work has caught up with him; but we would like to thank you, Harold, for your very valuable work, and wish you every success. Jean Johnson, also of 2nd year, was elected unopposed to become Student Vice-President. We now have two additional committee members following the recent S.R.C. elections—Jennifer Logan and Phil O'Grady—both of 2nd year, and we are looking forward to seeing them at future meetings.

A letter was also received from W.U.S., wishing to address us briefly on the aims and workings of their society. The suggestion was adopted wholeheartedly by the committee.

This month two major functions in the Pharmacy Department have been a film night held on July 15 and Open Day on July 23. S.U.P.A. arranged a film night with Burroughs, Wellcome for July 15 in the Hunterian Theatre of the Old Medical School. B.W.'s kindly loaned us their machine and operators, and enabled us to show two films from Professor Thorp's library, as well as the films they provided. The Professor gave brief explanatory notes on the films, which were on Tubocurarine and Acetyl Choline, and Mat. Med. students found these particularly interesting and helpful for their work. Students gave a silver coin as they passed out of the theatre. Our thanks go to Burroughs Wellcome and to Harold Menson, who made the necessary arrangements.

The second function, and by far the most important in the Department itself this term, was the Pharmacy display in connection with the University Open Day held on July 23. The Teaching Staff arranged the displays for Pharmacy, and students helped with preparations on the Tuesday night beforehand, and also demonstrated the wonders of Pharmacy to the public on the Saturday afternoon. People streamed through the labs., where they saw injections being made and autoclaved, preparation of eye drops, the effect of antibiotics on various organisms in cultures, tablet making and disintegration tests, manufacture of sulphanilamide, colour changes of indicators in acid/base titrations, ether extraction and laboratory animals used for testing and research work. Students were kept on their toes all afternoon answering the questions fired, and were a little stumped when asked why the white rats used for testing had no hair on their tails. A rather frustrating afternoon was had by the group on the tablet-making machine, but as a result of their efforts the Pharmacy Department now has a tablet-making machine which will produce tablets. The afternoon was a great success, and the staff and students were well rewarded for their hard work.

Once again Tony Galluzzo has turned out another excellent edition of "Mortar Monthly." The double-leaved newspaper form is certainly a big improvement on the old single-sheet form, and has produced a much bigger response to appeals for articles, which makes the load a little lighter for Tony. Keep up the good work, Tony, and keep the articles rolling in, students.

The Sports Reps. certainly seem to have been busy. Pharmacy teams have participated in football, women's basketball and hockey, and hope to enter in the tennis competitions. Results to hand so far show that we are not faring so well in the football comp., but the teams are playing well, and although the results don't appear to be so marvellous they are not altogether a true indication of the team's merit. They were beaten by a very superior Engineering team, 13-8, but were very unlucky to lose the match against Vet. Science in the last five minutes, when the opposition scored from three penalties right under the posts to win by 9-3. The experts have it that we were the superior team, but luck was against us in the match v. Arts, which they won 5 to 3.

In the other sporting spheres Pharmacy reached the semi-finals of the inter-faculty golf competition (no one knows how). The girls have been knocked out of both the basketball and hockey competitions by losing 5 to 7 against Medicine in the basketball and 6-0 in the hockey against Science—a very good effort, seeing that the hockey team had only seven members instead of the usual eleven. Among coming events in this direction are Mat. Med. v 1st year football, Pharmacy Men v. Pharmacy Women basketball (women's rules) and Chemistry Demonstrators v. Pharmacy I Women basketball.

Well, activities will be more or less at a standstill for the next month, as the University vacation starts in August and lasts for four weeks. There is nothing planned for the near future, mainly because Paper A of the Final is looming up for 2nd years during the vac.; but activities for third term will be planned at the next committee meeting. With these and the final exams. coming into view—rather horrifying how they suddenly seem to appear—third term should prove to be rather hectic.

VICTORIAN PHARMACY STUDENTS' ASSOCIATION

The main event for July was the ball, which was held at St. Kilda Town Hall on July 21. Among the official guests present were the Lord Mayor and Lady

Mayoress of Melbourne, Cr. and Mrs. F. Selleck; the Dean of the Victorian College of Pharmacy, Mr. A. T. S. Sissons, and Mrs. Sissons; and pharmacist-pianist Miss Winifred Atwell and her husband, Mr. Lew Levisohn.

The evening was opened with the presentation of the students' revue, Pills-a-poppin No. 5. The show was a great success, and congratulations are due to John Russo, the producer; Norm Bechler, of second year, who with the aid of George Watson's Band handled the musical score very capably; and Mike Favaloro, the designer, painter and mover of the props. and very artistic scenery. Miss Olive Wallace also deserves an honourable mention as ballet mistress. The ballets were again much appreciated, and their success was due not only to the hard work of the girls but to the interest and encouragement of Miss Wallace.



The Dean and Mrs. Sissons

After the revue the ball proceeded hilariously, maintaining its reputation as the best ball of the year. Entertainment was provided late in the evening by some of the Follies cast, who appropriated the piano and microphone to revive some songs from the show. Miss Winifred Atwell also kindly consented to play for us, and kept the whole hall enthralled with some of her well-known interpretations of pieces like "Black and White Rag."



Members of the Follies Cast

The celebrations continued until the early hours of the morning, and judging by the number of sore heads reported by travellers next morning Melbourne's chemists and students made a terrific night of it.

Early in August "good-bye and bon voyage" was said to Mr. J. G. Landers before his departure overseas to study pharmacy in Great Britain and on the Continent.

Mr. Landers, who has been assistant lecturer and demonstrator at the College for some time, was recently awarded the second Kodak Travelling Scholarship. The students from the College presented Mr. Landers with a travelling bag and also their best wishes for a successful and enjoyable trip.

Many students attended various lectures and functions at the conference of the Australian and New Zea-



"Mark Anthony's" Speech: "Friends, Romans and Fellow Publicans"

land Association for the Advancement of Science, which was held in Melbourne from August 17-24. Of particular interest was Dr. B. L. Stanton's lecture on the new Australian Pharmaceutical Formulary, which has just been released. Interstate students who travelled to Melbourne for this conference were billeted with Victorian students.

The term finished with a dance at the College on August 12, and a snow picnic, for all years, at Mount Donna Buang on August 14.

ADELAIDE UNIVERSITY PHARMACEUTICAL STUDENTS' ASSOCIATION

The only activity within A.U.P.S.A. during the past month was the Pharmacy ball. The period of social inactivity was caused by end of term exams.

The ball was a great success, and about six hundred persons attended. The refectory looked very gay with about four gross of coloured balloons tied in large bundles near the ceiling. Only a few streamers were used as it was agreed that the erecting of balloons was much quicker, and the overall effect much more impressive. Around the cloisters were six hundred feet of coloured lights, together with a "R" about six feet high in white lights opposite the entrance.

The band was led by John Rayment and Roy Tingay was compere. Excellent floor shows were given by Roy Tingay, Bob Maloney and Dave Evans (Medicine), and there was also a humorous wrestling bout.

With term exams over, A.U.P.S.A. members are eagerly looking forward to the Annual Dinner, which will be held on August 30.

MARGARET PURDON,
National Publicity Officer.

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Commonwealth and State News

NEW SOUTH WALES

PERSONAL and GENERAL

State News

Members desiring publication of personal items of interest are invited to write or telephone details to the Journal Correspondent in N.S.W. Phone BU 3092.

Be wise in time, and turn your horse out to grass when he shows sign of age.

—Horace.

Mr. L. A. Freeman is opening a pharmacy at Revesby. Mr. F. Hardaker has purchased Wallace's Pharmacy, West street, Ocean Beach, Umina.

Mr. W. E. Steffensen has sold his pharmacy at Grafton, and does not propose to enter business again.

Mr. M. B. Upton has purchased the pharmacy of Mr. K. L. Southwick at 189 Windsor street, Richmond.

Messrs. Hatfield and Tucker are now in partnership in the pharmacy at 430A Victoria road, Gladesville.

Mr. C. L. McCready has purchased the pharmacy of the late V. M. Stephenson at Mayfield West.

Miss D. H. Brown is in business at 324 New South Head road, Double Bay.

Mr. E. C. Rippon is now in business at Burnt street, Seaforth.

Mr. M. A. Godbold is opening a pharmacy at Kliens road, Northmead.

Mr. A. Montague has purchased Cockerill's Pharmacy at 180 King street, Lismore. Mr. Montague was formerly in business at Sale, Victoria.

Mr. J. D. Henderson has purchased Mr. R. Flett's pharmacy at Woonona. Mr. Henderson was formerly in business at Maylands, W.A.

The partnership previously existing between C. M. Steward and J. K. Fagan, of Wallsend, has now been dissolved.

CONGRATULATIONS TO MR. AND MRS. KENNETH POWELL

Mr. and Mrs. Powell are receiving congratulations on the birth of a son, Ian Roderick.

Ian has two sisters, Lyndall and Bronwyn, and two brothers, Hugh and Ross.

TO DR. AND MRS. VOSS: A SON

Dr. John and Mrs. Voss, late of Panania, announce the arrival of a son, John James Bolding.

Mrs. Voss was formerly Miss Patricia Kelly, sometime teaching fellow in the University of Sydney. She is also a Past President of the Association of Women Pharmaceutical Chemists of N.S.W.

Dr. Voss is at present engaged in cardio-respiratory research at the Sydney University, having been awarded a special scholarship.

DEATH OF ARTHUR POWELL

We regret to report the death of Arthur Powell, who passed away on July 14. The late Mr. Powell was in business at 520 Old South Head road, Rose Bay.

He is survived by his wife and son Kenneth, who is a councillor of the Pharmaceutical Society of New South Wales.

The funeral moved from the Chapel at 302 Oxford street, Woollahra, on Saturday morning, July 16, after a Service, for the Eastern Suburbs Crematorium.

DEPARTMENT OF PUBLIC HEALTH

Poisons Advisory Committee Appointment

The Governor-in-Council has approved of the appointment of Mr. W. F. Pinerua as a Member of the Poisons Advisory Committee, representing the New South Wales Branch of the Federated Pharmaceutical Service Guild of Australia.

M. O'SULLIVAN, Minister for Health.

PHARMACY BALL

The Pharmacy Ball for 1955 was held at the Trocadero, George street, Sydney, on August 1. Nearly 1200 people attended, and the function was voted by all to be quite an outstanding event.

The frocking was delightful, and the scene was one of gaiety and unalloyed enjoyment as 1000 dancers took the floor to the exciting rhythm of the Trocadero's band under the leadership of Frank Coughlan.

The President of the Pharmaceutical Society of N.S.W., Mr. B. G. Fegent, and Mrs. Fegent had a busy time welcoming the guests and performing the thousand and one little tasks with just the correct nuance.

N.S.W. CHEMISTS' GOLF CLUB

Meeting at Elanora Country Club on August 18.

Four Ball

Winners: Len Weiland (16) and Bill Lambert (10), 43 points.

Runners-Up: Warwick Rourke (8) and John Gostelow (14), on a count-back from Ray Walters (16) and Alan Weir (11), 42 points.

Individual

A Grade: Alan Weir (11), 36 points.

B Grade: Tom Barry (16), 33 points.

Grade: Joe Rackham (27), 31 points.

Next Meeting: Oatlands Golf Club, Tuesday, October 18.

Christmas Meeting: Cromer Country Club, Tuesday, December 6.

AMPHETAMINE

Poisons Act 1952.—Proclamation

(L.S.) J. NORTHCOTT, Governor.

I, Sir JOHN NORTHCOTT, Knight Commander of the Most Distinguished Order of Saint Michael and Saint George, Knight Commander of the Royal Victorian Order, Companion of the Most Honourable Order of the Bath, Lieutenant-General on the Retired List of the Australian Military Forces, Governor of the State of New South Wales and its Dependencies in the Commonwealth of Australia, with the advice of the Executive Council, and in pursuance of the provisions of the Poisons Act 1952 do, by this my Proclamation, ~~delete the following entry at present appearing in Schedule Three (Restricted Drugs) of the Poisons List:—~~

Amphetamine and its salts, except when the base is supplied for inhalation absorbed upon an inert solid material, or when such substances are compounded with other drugs in tablet form in a quantity of 2 mg. or less per tablet.

Signed and sealed at Sydney, this eleventh day of May, 1955.

By His Excellency's Command,
M. O'SULLIVAN.

(1810).

GOD SAVE THE QUEEN

Published in Government Gazette No. 53 of May 27, 1955.

NEW SOUTH WALES—Continued

ASSOCIATION OF CHEMIST BOWLERS

Another successful "Bowls Day" was held on July 29 at the North Sydney Bowling Club, and despite the overcast sky and boisterous wind conditions, 56 members competed in the various events, commencing at 10 a.m. Fourteen teams of seven rinks soon settled down to keen competition, many close scores being recorded before the luncheon adjournment.

The players and a number of enthusiastic supporters sat down to an excellent luncheon prepared by the catering staff of the North Sydney Bowling Club, and immediately afterwards opportunity was taken to hold the Annual General Meeting of the Association.

The office-bearers elected were:

President: R. J. Hawkins.

Vice-Presidents: H. Gilbert, N. Orr, V. Phillips.

Hon. Secretary: N. Berry.

Hon. Treasurer: W. Anderson.

Committee: R. Larkin, K. Jordan, A. Collerson, A. Jones, K. Thomas, J. Hansell, T. Redmond, A. Francis.

Mr. Allan Turner, Manager of the Henselite Bowls Co., did not seek re-election as Hon. Secretary, a position he had held since the club's inception. Mr. R. J. Hawkins, the President, praised the work performed by Mr. Turner, and thanked him for such splendid services. A presentation is to be made to Mr. Turner at a future date.

Play was resumed immediately following the luncheon and meeting adjournment, and although weather conditions remained unpleasant, the players lost none of their enthusiasm, as the games continued with keen rivalry but in the most friendly spirit.

When the final game concluded the results were announced. Vice-President H. Gilbert presented the trophies, and complimented the various winners:

Aggregate winners: E. Fink (skipper), W. Anderson, P. Quinn, P. Cosgrave.

1st section winners: R. J. Hawkins (skipper), L. Thomas, R. Strang, L. Locantro.

2nd section winners: H. Harbey (skipper), T. Douglas, C. Poulson, R. McCaughey.

3rd section winners: C. Hart (skipper), A. Jones, G. Newton, J. Strauss.

A pleasing feature of the competitions was the success of new members: P. Cosgrave, P. Quinn, L. Locantro, C. Poulson and T. Douglas.

The Association is busily engaged arranging details associated with the forthcoming visit of the Queensland Chemist Bowlers, and would appreciate early application from all who propose to attend the various functions.

The itinerary for the visit is:

Sunday, October 2: Visitors arrive. Cars take visitors to "Florida House," Tivoli avenue, Rose Bay. Dinner 6 p.m.

Monday, October 3: Car trip to Manly. Lunch at Harbord Bowling Club. Social game and afternoon tea.

Tuesday, October 4: First test at Kensington Bowling Club 1.30. Lunch and afternoon tea.

Wednesday, October 5: Second test at Double Bay Bowling Club 1.30. Lunch and afternoon tea.

Thursday, October 6: Third test at Chatswood Bowling Club 1.30. Lunch and afternoon tea. 8 p.m., presentations at social night at Kensington Bowling Club. Entertainment and supper.

Friday, October 7: 9.30 a.m., car trip to South Coast. Lunch, social game and afternoon tea at Wollongong Bowling Club.

"TOO LAZY" TO GET ON MEDICAL REGISTER

A man charged with operating as an unregistered medical practitioner and with unlawfully dispensing drugs told Burwood Court he had failed to register as a practitioner through laziness.

Before the court was Geoffrey Laurence Wadeson (43), unregistered medical practitioner, Victoria road, Burwood, who was charged with:

Issuing a prescription containing sodium phenobarbitone at Burwood on July 27.

Posing as a registered medical practitioner at Burwood on August 4.

Being illegally in possession of drugs at Burwood on August 4.

Illegally issuing a prescription containing tincture of opium at Burwood on July 27.

Stealing goods valued at £30 from the Metropole Hotel, Sydney, on January 17.

"I admit I had been putting off the completion of my registration more through laziness than anything else," Wadeson said.

Mr. H. L. Sargeson, S.M., said the court was quite satisfied Wadeson was entitled to practise as a doctor, but the charges were serious.

He remanded Wadeson without bail on all five charges to August 19.

SIR EARLE PAGE CHANCELLOR OF NEW UNIVERSITY

In an impressive and colourful open-air ceremony on August 5, the Federal Minister for Health, Sir Earle Page, was installed as first Chancellor of the University of New England.

The ceremony was held in bright sunshine in the courtyard of Booloominbah, a big house 2½ miles from Armidale—now a university city.

It was attended by the Governor-General, Field-Marshal Sir William Slim, and Lady Slim; the Federal Treasurer, Sir Arthur Fadden, representing the Commonwealth Government; the Deputy Premier of N.S.W., Mr. R. J. Heffron, representing the State Government, and many other distinguished personalities.

These included representatives of universities in Britain, Canada, India, Pakistan, South Africa, New Zealand, Hong Kong and Australia.

The ceremony began with the conferring of the first honorary degree of the university, of Doctor of Science, on Sir Earle.

Then followed the installation.

The Vice-Chancellor, Dr. R. B. Madgwick, outlined Sir Earle's record in war and peace.

He said: "We are grateful, as we set out on our task of building in these glorious surroundings a great university, that we have as first Chancellor one who is held in affection and respect not only by the members of the university itself, but by the whole of Australia."

Sir Earle stepped forward, divested himself of the scarlet and gold gown he wore when receiving his honorary degree, and, amid prolonged applause, put on the robe of Chancellor of the university.

Then he turned to the big audience and said: "No honours I have gained have inspired me as this has done, nor given me the same sense of personal pride and pleasure."

After presenting a loyal address from the university to the Governor-General, Sir Earle referred to the untiring efforts of the founders of the university. Sir Earle said the two new Faculties of Rural Science and Agricultural Economics, which are being established at the university because of the importance of the primary producing region, were new departures in Australia.

Sir William, in reply, said: "The university must do more than teach a man how to earn a living; it must

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Replacement Caps	8/-	1/-
Replacement Discs	4/-	6d.

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NEW SOUTH WALES—Continued

teach him how to live. There are more clever men than there ever have been, yet wise men are as rare as ever. This university will devote, I trust, a large amount of its energy towards producing them, for they are the men who are wanted most in these days."

UNVEILING OF HONOUR ROLL

On July 21 the 1939-45 Honour Roll was unveiled at a ceremony held in the Society's Board Room at "Science House" by Mr. Loris Ingamells, who is a Returned Serviceman from the First World War.

Prior to the unveiling, the President of the Pharmaceutical Society of New South Wales, Mr. B. G. Fegent, welcomed the following:—Messrs. J. L. Townley (President, The Pharmacy Board of N.S.W.), L. W. Smith (President, F.P.S. Guild of Australia (N.S.W. Branch)), Neil Steffensen (President, S.U.P.A.), Miss M. Sweeney (President, Association of Women Pharmaceutical Chemists), Councillors K. H. Powell, A. F. Winterton, E. G. Hall, K. A. Cartwright, H. W. Read, A. W. West and G. G. Benjamin; Messrs. R. Barbuto, F. Little, C. A. Willis, A. G. Ball, N. Bridgefoot, G. H. Bruce, A. D. Middleton, D. Ford, J. K. Gill, J. Rackham, R. Welladsen, S. Palfreyman, G. Harman, R. W. Munson, A. Stahel and R. Austin (Committeemen of Management, R.S.L. Chemists' Sub-Branch) and Mr. A. E. Conolly.

Mr. Fegent said he was very pleased that Mr. Ingamells had consented to unveil the Honour Roll. He was a Returned Serviceman from World War 1, he was a pharmacist and first President of the Chemists' Sub-Branch of the R.S.S.A.I.L.A. In addition he was President of the Pharmaceutical Society of New South Wales from 1924-27. His activities had also left their mark on the Guild. He had been first President of the New South Wales Branch, holding office from 1928 to 1932.

Mr. Fegent then asked Mr. Ingamells to unveil the Honour Board. (Applause.)

Mr. Ingamells said: "I am deeply appreciative of the honour conferred on me in my being asked to perform this ceremony."

Mr. Ingamells said of those who served in the first

World War, many had faded away, but the Honour Roll served as a reminder of the work they had done.

In the second World War the combatants flew or rode while the men of the first World War foot-slogged. Mechanisation was the great difference in the second war. Previously enteric fever during wartime had killed more soldiers than the enemy. During the first World War great progress had been made, but there were no sulphas or antibiotics. He then gave examples of his experiences in 1916 in relation to the paucity of medical stores on a ship at Plymouth.

Mr. Ingamells said that the Honour Roll would perpetuate the names of those who served in the 2nd A.I.F.

Mr. Ingamells then unveiled the Honour Board.

The names inscribed on the Honour Board are as follows:—

ADOLPH, A. A.
ALDERSON, E. S.
ANDERSON, F. O.
AUSCHAU, J.
AVIS, A. H.
AVIS, B.

BAILEY, G. H.
BAKER, L. D.
BAKER, S.
BALL, A. A.
BARBUTO, R.
BARDEN, R.
BECHER, C.
BECKLEY, J. K.
BERNER, P.
BIGNELL, F. E.
BIRD, J. W.
BLACKETT, R. R.
BLUMER, F. D.
BOLTON, M. R.
BORTHWICK, J. M.
BRADFORD, C. D.
BRAKE, E. L.
BRAND, L. G.
BRATHWAITE, P. L.
BROEL, C.
BRUCE, G. H.

CARLISLE, J. R.
CASTON, S. C.
CHAPMAN, A. W.
CHAPMAN, K. S.
CHILTON, R. R.
CLARK, A. J.
CLARK, L. G.
CLEARY, M. P.
COHEN, A. J.
COLEMAN, F. C.
COMINS, T. B.
COX, C. B.
CRAMERI, A. R.
CRAWFORD, H.
CRAWFORD, R. B.
CRISFORD, C. K.
CUMMINS, H. F.
CURRAN, S. A.
CURRIE, R. L.
CURTIS, A. P.
CURTIS, G. W.

DALGLEISH, E. O.
DAVEY, A. M.
DAVIES, J. L.
DAWE, A. E.
DIAMOND, R. R.
DOUGAN, D. H.
DOWE, E.
DRAPER, G.
DUFF, H. E. N.
DURNO, L. A.
DYASON, R. C.

EARP, J. W.
EASTMUIR, L. L.
ECCLES, R. S.
ELTON, B. R.
ENNIS, N.
EVANS, T. H.

FAY, K. J.
FAYLE, D. D. H.
FEGENT, B. G.
FELLER, R. W.
FELTON, D.
FIELD, A. T.
FLEMING, R. C.
FORSSBERG, C. S.
FOY, R. K.
FOX, V. G.
FULTON, G. H. W.

GARDNER, W. K.
GLENNAN, J. J.
GRAY, V. N.
GREEN, P. M.
GRIMSHAW, J.
GUDGEON, M.



The first Executive of the New South Wales Chemists' Sub-Branch R.S.S.A.I.L.A. Left to right: R. Barbuto, Hon. Treasurer; L. Ingamells, President; B. G. Fegent, Hon. Secretary.

UNVEILING OF HONOUR ROLL

HANLY, J. P.
HARMAN, F.
HARMAN, G.
HART, P. F.
HAWKE, R. R.
HAWKINS, T. A.
HEATHWOOD, A. M.
HEILY, J.
HENDERSON, H. M.
HENDERSON, J. D.
HILL, K. E.
HOGAN, N. J.
HOLLINGSWORTH, T. W.
HOLMES, P. F.
HORAN, T. J.

INNES, W. R.
IRVINE, J. J. A.

KELLEHER, J. G.
KELLY, K. J.
KEOGH, E. P.
KILMINSTER, H. L.
KITE, H. N. T.

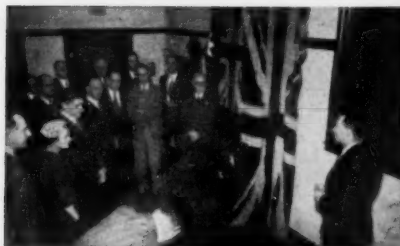
LARKIN, B. A. H.
LASSAU, E. M.
LEGGATT, C. A. C.
LEGG, H. O.
LITTLE, F. N.
LOCANTRO, A. J.
LOFFBERG, O. C.
LONG, J. H.

MACCOURT, A. W.
MAHER, E.
MALLAM, W. R.
MARSH, R. C.
MARTIN, T. C.
MASTERS, W. G.
MEIKLIJOHN, C. J.
MEIKLIJOHN, R. S.C.
MICHAEL, A.
MICHEL, C. S.
MILLAR, J. C.
MILLAR, J. O.
MILLER, N. L.
MILLNER, J. S.
MILLS, J. W.
MINTORN, W. H.
MOLONEY, M.
MONK, W. E.
MOORE, B. J.
MOORE, J. J.
MOORE, W. R. D.
MORRIS, S. B.
MORTAL, C. M.
MULLEN, K. P.

McCABE, V. T.
McCAUGHEY, R. L.
McCLOSKEY, D.
McCREADY, C. L.
McGLYNN, E.
McIVOR, A. L.
McWHIRTER, G.

NEWTON, G. N.
NOLAN, N. J.

O'CONNOR, L. U.
O'GRADY, J.
O'NEILL, A. B.
ORR, N. V.
OSBORNE, T. B.
OWENS, E. P.
OWENS, M. W.
OXLEY, E. A.



From top, left to right: 1. Mr. B. G. Fegent, President, Pharmaceutical Society of N.S.W., addressing the gathering. 2. Mr. Loris Ingamells has just unveiled the Honour Roll. 3. Messrs. George Harman and L. Ingamells. 4. Messrs. Bob Barbuto, Ray Austin and Alan Ball in repartee with Mr. Leslie W. Smith. 5. Mr. A. E. Conolly and Mr. Aub. Winterton, Treasurer, Pharmaceutical Society of N.S.W., pose for a candid flash. 6. Messrs. Ken Cartwright and Ted Hall. 7. Mr. Fegent, Mr. Jerry Benjamin, with Mr. Ken Powell in the foreground. 8. Messrs. Neil Bridgefoot, Alan Middleton and Alf West. 9. Messrs. Stan Palfreyman, John Long, George Harman and Loris Ingamells. 10. Messrs. Joe Rackham, Clive Willis, David Ford and Frank Little.

VITAMIN E IN MEDICINE

CHRISTY C. J. Vitamin E in menopause: preliminary report of experimental and clinical study. *AM. J. OBSTET. GYNECOL.* 50, 84-7 (1945).

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Ballina

J. Hajjar

South Grafton

J. C. Lane
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L. R. Thomas
H. Ayers

Grafton

F. A. Harper
J. Popham
J. D. Ada
H. Foster

Tenterfield

G. E. Brooks

Sawliell

J. Blenkin

Coff's Harbour

A. R. W. Forsyth

Ulmarras

G. K. Fetterplace

Murwillumbah

D. Gielis
P. H. Outridge
H. J. Holmes
R. Whittle

Casino

J. T. H. McDonald
D. G. Waldron
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NEW SOUTH WALES—Continued

lines from display. A non-display attitude was carried out.

Mr. Forsyth: "Coff's Harbour took drastic action, also Sawtell."

Mr. Ross Lane: "What does the N.S.W. State Branch Committee think of the letter from Mr. Ross?"

Mr. Stanford: "I found people were not really Kleenex minded. They bought other brands easily."

A member from Casino said that Kotex and Kleenex had been put under the counter. The Guild's advice had been followed blindly.

Mr. Smith said, "I will trace briefly the history of the quarrel. Firstly we believe we can conduct a campaign with vigour. My opinion is still the same as when I sent you the letter; we would be none the worse off if we never sold any of the firm's products. The next move was, we kept the campaign going. Later an approach came from the company to Mr. Ross."

Mr. Conolly then explained matters further, and illustrated the method developed by a member to give Velvettes priority.

Mr. Smith said that N.S.W. should not become a rubber stamp. When others were patently wrong, they should tell them so and not become submissive.

Mr. Frith asked, "How many N.S.W. representatives are on the Federal Council?"

Mr. Smith said, "Two out of 12 and none on the Federal Executive."

An inquiry was made, "Were the terms issued final or tentative?"

Mr. Smith: "They are final, and were accepted by the Federal Executive."

Chemists (State) Award.—Mr. Smith said that "we see-sawed about, the Union and the Guild." The matter of a new award was part heard by Mr. Justice Beattie. There had been some increases which had been published in the Guild Service Bulletin. Later there would be increases in junior rates. A complete review of the industry was set down for hearing after the law vacation.

Mr. Smith went on: "An alteration to the proportion clause would be uphill work because it had been in the award for many years. The matter would be discussed with Barrister Dey next week. An interim award only had been made at present. Witnesses would be needed to give evidence in support of alteration of the proportion clause to one to one."

Serious Mistake in Dispensing.—Mr. Smith, continuing, said: "I wish to draw attention to a matter of a serious nature. I issue a warning, make sure to keep to the law. I appeal to you to see that no D.D.'s or poisons are left on the bench."

Floods Appeal.—"Mr. Pinerua and I went to the flooded area, and later I went up north. We then went through the letters from claimants, and we disbursed the money in two series of payments. Every penny collected, about £11,000, was disbursed in full. An audited balance-sheet will be published to show that everything is above board."

Mr. Smith then resumed his seat to a round of applause.

Mr. Frith: "I congratulate the State Branch Committee and Mr. Conolly for the magnificent work done. Lismore is in some respects responsible for the inauguration of the flood fund. We well know the terrible effects of floods here in Lismore, and it is a great thing for flood victims to know that others are thinking of them. We knew how they felt. Gosford and Newcastle also rallied around and collected large sums for the fund. I congratulate the State Branch Committee for organising the flood appeal on such a wide scale. It was a magnificent action." (Applause.)

At this point, 12.30 p.m., the meeting adjourned for lunch downstairs in the Apollo Hall.

Upon resumption, Mr. Frith called on Mr. Fegent to address the meeting.

Mr. Fegent: "First of all I thank Mr. J. C. Lane for his kind words at the beginning. I am pleased to come to this Zone, the first I have visited since I became President. I express on behalf of Mr. Hall his sincere thanks for your support during his two years of office."

Mr. Fegent then discussed various matters under the following headings:—

Poisons Act.—"The new regulations are not fully proclaimed yet. There is one amendment to Schedule 3. There is now no limit on Dexamphetamine, Methylamphetamine or Amphetamine. The proclamation takes them all in. The rest of the new regulations have not yet been proclaimed, and we are no further advanced practically than last year.

Code of Ethics.—"This was put up to the Annual General Meeting in March, and we are holding a special general meeting on September 27 to further discuss the matter. If you have any comments, send them in to us by August 8, when we are having a special Council meeting to discuss them.

Coloured Tablets.—"I would like to tell Mr. Outridge that his suggestion about coloured tablets was brought up before a meeting of the Poisons Advisory Committee.

Full Time Pharmacy Course.—"The University has been given extra grants of money, but the new course will not come in yet. The Senate considers that the new chemistry school should be erected first.

Post-graduate Lectures.—"Last year Professor Thorp and Mr. Cobbin delivered lectures on Pharmacology, and Mr. Wright this year is following up those lectures. We are making them available to country members at £1/1/- per set for each series. If any of you want copies, let us know today, and the money can be fixed up later.

Three Monthly Lectures by Science Group.—"If any of you are in Sydney on July 26, Dr. Adrian Johnson is giving a lecture on 'What the Dermatologist Wants from the Pharmacist.' The lectures are free and open to all persons in pharmacy.

First Year Apprentice Lectures.—"Complete sets are available for country apprentices, and we would favourably consider application for them by country pharmacists.

New A.P.F.—"A completely new and up-to-date edition will be available soon. I am hoping that all pharmacists will see fit to standardise on the new A.P.F. As soon as we can get copies we will take up with the Hospitals Commission the matter of their use in public hospitals.

Table of Incubation Period for Certain Infectious Diseases.—"As requested by Mr. Moen, I have prepared a table showing the incubation periods, etc., of certain infectious diseases. We will be sending a copy to Mr. Moen. Copies will be available for others if they want them. I have found the table very useful in my pharmacy.

Ban on Heroin.—"Heroin will be banned as from October 1, 1955. It will then be illegal to dispense it or even to have it in the pharmacy. We have no information from the Chief Secretary on how to dispose of the Heroin on hand. Heroin Tablets, also preparations containing Heroin like Diacol, now replaced by Diacol D. I don't think the Department would accept the explanation 'We poured them down the sink.'

"I have gone through the various matters rather hurriedly. Have you any questions?"

Mr. Bert Brand: "I am glad to hear that the Society is behind the faculty of pharmacy. With my little association with the New England University, I know that a faculty will improve the status of pharmacists. I am very glad the Society is behind the whole course at the University. Pharmacists will have a much better standing then."

Mr. Lockett, of Casino, and Mr. Brooks, of Tenter-

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NEW SOUTH WALES—Continued

field, signified they would like copies of the First Year Lectures.

Mr. Ada: "When the Government bans Heroin and you must destroy it, do you receive any compensation?"

Mr. Fegent: "No, you don't."

Mr. Bert Brand: "Prescribe it before October 1 'give it to the horses'." (Laughter.) (Mr. Brand spoke jocularly.)

Mr. Frith said: "Thank you, Mr. Fegent, for attending and making your presence felt here today."

"Members would be well recommended to subscribe to the Post-graduate Lectures at £1/1/- for each series. I am one of the youngest here, but I am already out of date."

Mr. Fegent: "Concerning flood relief to which the Society contributed, I record the Society's thanks to the Guild for the way it organised the appeal."

Mr. Ada: "A calamity fund has been suggested by Mr. George Stephens, £1, £2 or £3 per year set aside for a calamity fund."

Mr. Stephens said: "Not being in a flooded area, I can suggest that a levy of £3 per year be added to the subscription."

Mr. Fegent: "I will put it to the Council at next meeting."

Mr. Frith: "It is a good idea in itself, but it becomes like a pension if it is there. I prefer it to be conducted as it was formerly. Goodwill then comes spontaneously at the time of the disaster, and it is more appreciated. The man's friends have rallied round at the time."

Mr. Fegent: "I will bring it forward."

Mr. Frith: "Is there any general business Zone members would like to bring up concerning the Guild?"

Mr. Stephens: "Max Factor's representative says the profit margin is 50 per cent. on cost, but it is not so unless you buy a £10 parcel. Why not take it up with them?"

Mr. Thomas: "David Jones and other dealers have to buy £50 parcel to get the same terms as the £12 parcel to chemists."

It was decided that the State Branch Committee should look into the matter.

Mr. Ross Lane: "Respecting the plebiscite in relation to the Medical Benefits Fund and the Hospitals Contribution Fund agencies, what was the response?"

Mr. Smith: "There are two schools of thought. One, carry it on as a service; others say we are working too cheaply, so down tools. We cannot interview Mr. Cade or Mr. Miller again without loss of dignity. They have no intention of increasing the commission. Suffice it to say there is not the boldest chance of getting an increase. It amounts to working for 5 per cent. or downing tools."

Health Department Representatives

Mr. Frith then invited Mr. Jewkes and Mr. Kelleher to join the Executive at the table. (Applause.)

Mr. Frith said: "It is a great honour to be the first Zone to be treated to a visit by these two important gentlemen. I feel such visits can produce nothing but good, and understanding will be born. You come to an area where the pharmacists are strongly organised and very united."

"Before you have anything to ask Mr. Jewkes or Mr. Kelleher, I call on them to address you to expound on difficulties they have found in the working of the National Health Schemes."

Mr. Frith then called on Mr. Jewkes.

Mr. Jewkes said that his experience as a pharmacist enabled him to administer the law with a complete knowledge of the difficulties of pharmacists in business.

"The purpose of these meetings is to get in touch with you individually first in a general meeting and separately afterwards. The more you know about our difficulties, and the more we understand yours, will

there be produced the greatest mutual trust. There are steps in the scheme which are impossible to broadcast. You sometimes think what we do shows bureaucrats in action. I saw disparaging remarks by the Guild on it. A good deal of regulation has built up since the scheme started. Eighty per cent. of the regulations I'd like to see in the dustbin. The fact is that regulations, sanctions and penalties have been put in because of some abuse. No abuses, no regulations. I could give you chapter and verse why we proclaim any regulation. It is a sad state of affairs in which the two professions are involved. We get such a number who see in every form of legislation an opportunity to get something on the side. The percentage practising these things is relatively small. From the point of view of Government control we are not affected by numbers, but by what has happened. Then we bring down a regulation with a penalty. The point is that most regulations have been inserted because certain persons have abused their responsibilities. In a case in N.S.W. recently the judge remarked on the responsibilities of the professions. I can say the less regulations the better from the administrative point of view. They have to be policed.

"I will only talk on policy matters. I would like to hear questions. Mr. Kelleher will talk on State matters.

"As the result of sampling a great improvement in the overall picture is evident, 90 per cent. of prescriptions tested now pass. This is a very satisfactory position, but we should not stop at 90 per cent.

"Two things we set out to do. Chemists to be paid within 30 days, and that has been achieved in rather a remarkable degree, and it is no mean feat to keep it up. We have been able to maintain pharmaceutical administrative control at all points. We have 18 pharmacists now, there will be 20 at the end of the month, and we still want more.

"When you require assistance get in touch with the Chief Pharmacist. He is anxious to help the pharmacist. If you come to Canberra, I will be happy to talk things over with you." (Applause.)

Mr. Frith then called on Mr. Kelleher.

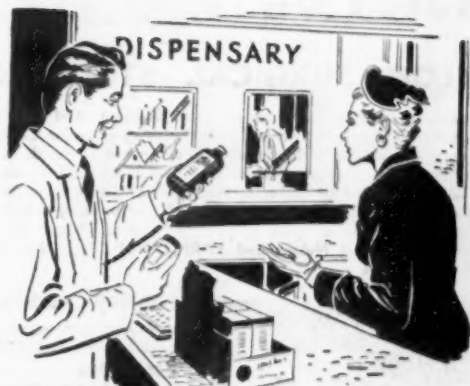
Mr. Kelleher: "I feel that perhaps I should not have much to say at this stage, and can best convey information to you by answering questions. I am very pleased to be able to attend this Zone meeting; there should be more personal contact with the Administration, particularly by country pharmacists. The State Administration does not make policy. Our aim is to do the best for the chemists and at the same time observe the policy laid down."

Mr. Frith: "Mr. Kelleher and his Department have been most co-operative with us in any matter of administration rather than policy. On the credit side, Mr. Kelleher has done quite a lot; for instance, during the severe flood the whole of my monthly claims (N.H.S. prescriptions) were damaged by the flood waters. Mr. Kelleher, in association with the Guild, arranged for the payment of the prescriptions, although some were most difficult to decipher.

"We see such things as the new formulary for P.M.S. This is all to the Department's credit. The little book is an entity of its own. However, it would be a good thing for all lists to be bound. The list of P.M.S. Ready Prepared Preparations is roneoed only and is easily torn."

Mr. Tuckett: "What is the justification for the 10 per cent. discount deducted from P.M.S. extemporaneous scripts?"

Mr. Jewkes: "I would not attempt to answer completely, as it would be a long and involved explanation. This 10 per cent. was the result of long negotiations between the Government and the Guild. We were negotiating with the Guild representatives, and the Guild agreed on this and that. The whole meant coming to an agreement with the Guild. The question of price is one result of the negotiations. Treasury



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NEW SOUTH WALES—Continued

was involved, and the final decision was met by a composite arrangement.

"I would like to say regarding the Treasury that in many respects it has been able to do a pretty fair deal. The chemists have got to satisfy the Government that the money being paid is not adequate. The Government does not want to under-pay the chemists. If the Guild considers the payment is inadequate, it must have proof of under-payment."

Mr. Spillane: "In Queensland they have a book with considerable information in it."

Mr. Kelleher: "You could not get a bound book for 1600 chemists for under £1. We would like to roneo on one side of the paper, but the Paper Control Committee says we must use both sides in order to economise."

Mr. Forsyth: "Could it be done on thin board to fit the Guild Price List? I have got mine in cellophane, but the roneoed thing is not very legible."

Mr. Kelleher: "We will see what we can do about the board."

Mr. Outridge: "I have noted variations in the scheme. Could the Iron Tablets be increased to one month's supply? One month's supply of Tabs. Ferri Sulph."

Mr. Kelleher: "The regulation re monthly supply is now in force. Regulation 26 dealing with isolated areas. The doctor should write down explaining the circumstances, and permission for one month's supply could be given if merited."

Mr. Outridge: "The doctors won't write down. Another one was children who have had endocarditis, one three times a day. Fifty is the limit."

Mr. Kelleher: "The doctor has only got to drop a line to us to get permission to order one month's supply. The doctor would then quote authority number so and so."

Mr. Jewkes: "The reason why double and special supplies were abandoned was because of blatant over-prescribing. In one case the doctor ordered special supply on every script he wrote. This led to people having hundreds of Sulphadiazine Tablets in their cupboards. In other cases people said they would like to get rid of the stuff they had accumulated, so we were obliged to withdraw the original provisions."

Mr. Outridge: "To go back to the doctor so often for Ferri Sulph. is going to cost the Government more."

Mr. Jewkes: "The Director-General has a right to increase the number indefinitely to suit the patients. He has a right to make a large amount available at one time where necessary."

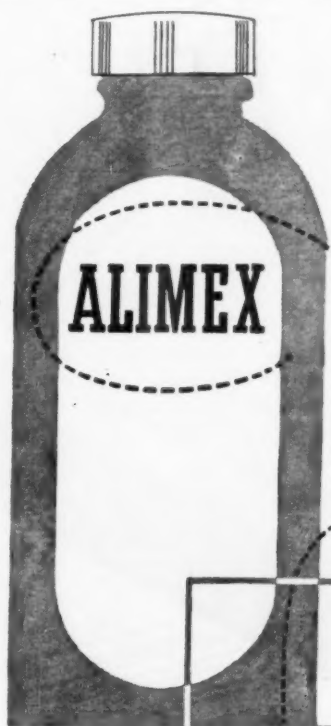
Mr. Arthur Brand: "Could we not have more notice about price changes?"

Mr. Brand: "What about deletions from the list?"

Mr. Jewkes: "Prices are based on one month's supply. All the buying prices are built on the one-man pharmacy, but you are now buying on a cheaper basis than the price we are paying. You should not have more than one month's supply."

Mr. Kelleher: "We 'phone every Sydney manufacturer, etc., every month about everything on the P.B. List."

Mr. Frith: "There has not been any trend upwards. All of us have been penalised for holding stocks to supply a good service. We have got to hold the stock. One month's supply would not give a service to the public. Why do the Government insist in dropping prices immediately they hear about it? Two or three months' notice of a drop is required, otherwise the chemist is not able to clear his stocks. They are bought as a service, and he loses by holding them. Two months' notice before it comes into operation would put a better taste in the pharmacist's mouth. The pharmacist was a free agent. He chose pharmacy of his desire to engage in private enterprise. I realise the importance of regulations to prevent dishonesty,



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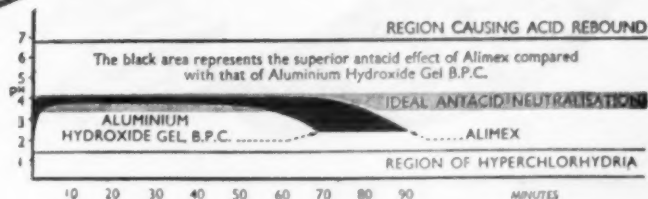
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but I feel that deletions without notice and price drops and regulations which destroy stock affect him adversely, and he gets a nasty taste in the mouth. I would like to see more notice given."

Mr. Forsyth: "If a doctor orders Ext. Hepatis Liq., we have got to get it up by goods train, delivery four weeks. I have more injection of Hepatis Liq. in my pharmacy than any in Australia. I now get a small number of scripts only. I am concerned about deletions. In the country it is a definite hardship. You can't buy from day to day in the country."

Mr. Forsyth continued: "It is irksome to me to have scripts returned. In my case, for example, Mist. Aspirin et Codeine. The doctor does not specify A.P.F., and the script is returned. The chemist is giving a service to the public. Mrs. S. has been to the doctor, who does not endorse it A.P.F., and you can't dispense it on the P.M.S. Little things like this should be avoided."

"How do we stand with the Department when the quantity is not stated?"

Mr. Kelleher: "We have only power to disburse public funds, if the doctor does not prescribe a brand. If it were only an A.P.F. one, there would be no difficulty about it. The auditor comes round and says you have paid 1/6 more than the prescribers' list. You cannot write things on a P.M.S. script and make it a higher price if it is in the P.M.S. list."

A member: "With Tablets Sulphadiazine you pay on 5 grs. if the strength is not specified."

Mr. Kelleher: "No, we don't. Where he plainly writes a script for an adult we pay on 7½ grs. If the script is written Mary so-and-so, how can we tell whether it is a child or an adult?"

Mr. Hatfield: "I had one, 'Mary so-and-so.' I put on it 7½ grs., and it was returned to me."

Mr. Kelleher: "It is hard to know where to draw the line."

Mr. Fegent: "There is no Mist. Aspirin Codeine in the P.M.S. List."

Mr. J. C. Lane: "The busy practitioners in Grafton have not time to fully sign their names. The chemist dispenses the scripts to the correct requirements of the doctor. A full month's scripts come back marked 'No signature,' and the chemist has to wait for his money."

Mr. Ross Lane: "It happened in Grafton and South Grafton. Why don't they take the matter up with the doctor—that is, not signing his name in full? Why not pay on the doctor's signature? A doctor wrote 30 cc Chloromycetin Palmetate, stating I don't want any in the bathroom. This was paid for only after a lot of trouble."

Mr. Kelleher: "It can be supplied only in the original pack."

Mr. Ada: "Is there any way the doctors can be educated to write addresses on scripts? Have you sent any memos to the doctors from your Department asking them to observe the regulations?"

Mr. Jewkes: "It is a question of educating the doctors. They get all the notes you get. We ask the doctors to come along to meetings, but it is difficult to get them to come."

Mr. Smith: "When irregular scripts come in they have to be remitted to the prescriber to correct them."

Mr. Frith: "The chemists are being penalised."

Voice: "The chemists can't buy into fights with the local doctors. The Department should line the practitioners up."

Mr. Kelleher: "The matter varies in gravity. Where a chemist dispenses an Aureomycin prescription not endorsed 'restricted drug' the doctor may not be prepared to so endorse it."

Mr. Frith: "Where there is clear evidence that the doctor means to prescribe it free, the chemist gets 'fined' £3/17/6, which is a large amount to pay for the doctor's mistake."

Mr. Fegent: "When you get scripts disallowed, you have got to chase round to get the new script signed

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NEW SOUTH WALES—Continued

by the doctor and also by the patient. This is very difficult sometimes."

Mr. Kelleher: "Pin the new script written by the doctor to the old script signed by the patient."

Voices: "We did not know you could attach the new script to the old one."

Mr. Forsyth: "I sent in 50 scripts from my pharmacy at Coff's Harbour. On some the doctor had written C.H. Wouldn't that do?"

Mr. Kelleher: "Where scripts are incorrectly written and do not conform to the State law, we can't pay them."

A member: "In assembling our scripts for presentation for payment, can we sort them so as to help the Department?"

Mr. Kelleher: "You could put, say, all Sulphadiazine scripts together; this would facilitate pricing."

Mr. Ada: "I stock only B.W.'s Thyroid. If I send down a prescription priced on B.W.'s, the price you pay is always reduced to a cheaper brand."

Mr. Jewkes: "That is the general rule. We can't make a special rule for Thyroid. It is not legal to pay it. If no brand is stated, the smaller fee is paid. The Treasury auditor would not overlook it if we paid a higher amount."

Mr. Forsyth: "Why should the chemists' claims be knocked down?"

Mr. Kelleher: "The trouble is with the auditing. The auditors would be bound to pick on the man who did not do the right thing. We get 400,000 scripts per month for pricing, and we could not make special conditions for individual chemists."

Mr. L. R. Thomas: "It is only a matter of a few extra pence with Thyroids, yet we are responsible if drugs are not up to standard. Is there any check on manufacturers concerning drug standards?"

Mr. Jewkes: "In relation to everything that is packed, we don't hold the chemist responsible at all. We take samples from wholesale sources."

A member: "With tinctures and liquid extracts, if the quality is not up to standard, how would the chemist stand then?"

Mr. Jewkes: "We would be prepared to examine the manufacturer on that also. There is the Therapeutic Substances Act. If a chemist gave evidence that the quantity supplied was not that set down on the label, we would look at that one."

Mr. Kelleher: "We would get a sample of what the chemist had received."

Mr. Bert Brand: "I would like to ask Mr. Jewkes to say what he proposes to do with the doctors who issue wrongly written prescriptions. I would like to hear Mr. Jewkes on that point."

Mr. Jewkes: "I admit we get a number of prescriptions wrongly written due to the doctor's fault, and not the chemist's."

"The National Health Act now has a fair range of penalties. There probably could be sanctions for writing scripts wrongly. We have tried in various ways: reminders to the doctors, do's and don'ts. The Committee of Inquiry are trying to police the medical profession into playing a better part in the scheme. The question regarding non-compliance with details has been left to the chemist. As far as I am concerned I will go into the matter when I go back to Canberra. It may be possible to introduce a new regulation. Mr. Smith's suggestion is the best I have heard."

"There is a question of the law, what legal powers have we got, what can we do."

Mr. Osborne: "Where a drug is admitted as free, why is it not available in all forms?"

Mr. Jewkes: "By arrangement with the Guild. When the scheme came in, the medical profession decided it would be for ethicals for treatment of specific diseases."



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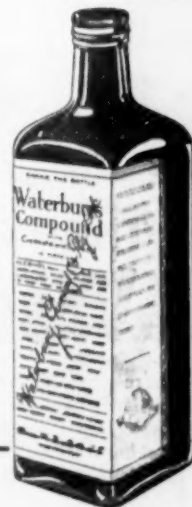
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Mr. Jewkes: "The Committee is composed mostly of medical practitioners. It has statutory powers. It meets quarterly, and considers applications for the admission of substances to the list."

Mr. Smith: "The Guild's representative is Mr. K. E. Thomas."

Mr. Jewkes: "The Minister could take something off the list without asking the Committee."

A member: "In the notes, scripts must be given a number, also a registered number. Is it compulsory to enter the scripts in a script book?"

Mr. Forsyth: "In my opinion, scripts should be returned to the doctor where they are not written properly. The chemist should not be penalised all the time."

Mr. Smith: "I will bring it up at the Federal Council meeting."

Mr. Outridge: "Regarding hospitals, the Hospitals Secretary must go through all the scripts. The Government pays for those on the restricted list, and the patients pay for the others."

Mr. Hatfield: "Can the doctor be made to write a script?"

Mr. Jewkes: "Is it an approved hospital? They must keep a record of antibiotics."

Mr. Smith: "Is there an R.M.O. there?"

Answer: "No."

Mr. Jewkes: "All the dispensing must be done under the doctor or registered pharmacist."

Mr. Smith: "Would the Determination under Section 99 conflict with the Act itself? I can nominate three hospitals where the law is not being carried out."

Mr. Jewkes: "Write to the Department giving details. I do get repeated complaints regarding hospital dispensing. The approved hospitals are approved between the Federal Minister for Health and the State Minister. All dispensing must be under the supervision of a doctor or a registered pharmacist. If evidence is given to us, the matter will be taken up with the State to explain why not. They are breaching the Commonwealth law."

Mr. Frith: "Where a doctor can 'phone a script verifying it in 24 hours, how do you get the script signed by the patient?"

Mr. Kelleher: "You can certify, supplied to patient, script 'phoned by doctor so-and-so."

Mr. Lockett: "I have pensioners living up to 70 miles away, and some suffer chronic complaints. They see the doctor, and require further treatment. The doctor writes the script. How do I get it signed and also sight the pensioner's card?"

Mr. Kelleher: "Certify, supplied by bus. Sighting of the pensioner's card is no longer necessary."

Mr. Stanford: "Some doctors refuse to put the pensioner's number on the script."

Mr. Moen: "With repeat authorisations the script number must be shown on the back, but it is already on the front."

Mr. Jewkes: "If there is duplication of work and it serves no useful purpose, I could look into it."

A voice: "What do you do when a doctor won't supply a script after 'phoning? There is £20 involved. I should have them within 24 hours."

Mr. Jewkes: "Submit a report to us."

Mr. Fegent: "Where the same benefit is prescribed on the same day for the same person, where the doctor writes two scripts on the same day would the chemist be paid then?"

Mr. Kelleher: "We would pay for it."

Mr. Frith: "A doctor cannot order more than 16 Chloromycetin Caps., but he writes two prescriptions dating them differently, say 14th and 15th."

Mr. Jewkes: "The doctor is committing a breach."

Mr. Kelleher: "The dispenser would be O.K."



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NEW SOUTH WALES—Continued

Mr. Lane: "As long as not dispensed in advance."
Mr. Hatfield: "Mist. Aluminium Hydroxide-Petro-
lagar (in S Group)."

Mr. Forsyth: "Chemists have been offered ready
packed Mist. Ammon et Senega. Chemists should not
be weak enough to buy it."

Mr. Frith: "I would like to express some sentiments
about dispensing fees. We are not paid enough for
dispensing. The blame is on the Guild. We get
reasonable prices for the drugs, but the dispensing
fee still sticks at 1/-. The Government must be aware
that it pays 1/6. We are not getting enough for the
dispensing fee. If the Government ever puts in a
complete dispensing service, 25 per cent. discount would
be the first, and they would bring down the dispensing
fee. I suggest the private dispensing fee for tablets,
etc., should be 3/-; 1/- is a wipe off. The fee should
cover more than our labour charge for dispensing."

Mr. Arthur Brand: "The D.D. fee, too, should be
increased. Anyone who employs a dispenser knows
that it does not pay."

Mr. Frith: "An increased dispensing fee should apply
to all dispensing, both private and Government. (To
be noted by the Guild for discussion.)"

Mr. Kelleher: "In some areas chemists are not doing
individual dispensing at all. They send the items to
the doctor or the hospital not even labelled. That is
not dispensing at all."

Vote of Thanks

At this point Mr. Bert Brand moved a hearty vote
of thanks to the visitors who had provided a very
interesting day throughout. It was splendid to have
further information about the schemes. He knew that
Mr. Jewkes would investigate the matter regarding
doctors' mistakes.

The vote of thanks was carried by acclamation.

Messrs. Jewkes, Fegent and Smith expressed thanks.
Mr. Frith said: "We do thank these people for coming,
and hope they will visit other areas, too, to convey a
better understanding."

Mr. Kelleher thanked the meeting.

Mr. Lane then moved a vote of thanks to the Chair-
man for the way he had conducted the meeting.

Proceedings concluded at 3.35 p.m.

PHARMACY BOARD

Monthly Meeting

The Pharmacy Board of New South Wales met at 52
Bridge street, Sydney, on July 12, at 8 p.m.

Present.—Mr. J. Townley (President), Messrs. L.
Smith, K. Cartwright, A. West, E. Dempster, G. Simp-
son and C. Gostelow.

Applications for Registration were approved as fol-
lows:—

(a) Having Passed Qualifying Examination: Evelyn
Marion Charles, Margaret Rose Simon and Annette
Rosemary Simmons.

(b) By Reciprocal Agreement: Gary P. Chatworthy
(from New Zealand), Maureen I. Fitzgerald (from New
Zealand), Neil R. Standfield (from Victoria), Harry Har-
per (from Victoria) and Harold S. Hertz (from Western
Australia).

(c) By Restoration: John David Henderson, William
Keith Lane, Brian Ell, Audrey Bessie Ogden, Frederick
Rewell.

Section 11 (e)—Foreign.—W. H. Keshishian, Cairo:
Referred to the Sub-Committee on Foreign Chemists
for examination and report.

Certificates of Identity.—Authority was granted for
the issue of Certificates of Identity in the following
cases:—Doris E. Bauer (to Great Britain), John F.
Regan (to Great Britain), Ross L. Clifton (to Great



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In post-war years a comprehensive plan of store modernisation has been in progress, and although each pharmacy has been an individual problem, due to differences in site, shape and size, there is an instantly recognisable family resemblance. Bray & Holliday are privileged to have been entrusted with this work.

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The illustrations show portions of the pharmacy at 253 Pitt Street. Among its many interesting features are the following:—

Emphasis on speedy sales, with small items below the eye line on patent medicine display shelves; open display counters near the entrance door, with provision for ample forward stock under the displays; fast replacement of stock from reserve immediately behind forward stock display fittings. The mirror treatment of the left-hand wall gives the effect of greater width to the shop, and a pleasing surround for small display niches. Note, too, how the full interior can be seen from the footpath.

Enquiries are invited from chemists in New South Wales.

Transportation costs prevent our carrying out modernization of pharmacies in other states.



**Have you
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IMPLANTATION
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*Simple
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In cases where a continuous supply of hormone is indicated, administration by fused, crystalline implants is simple, effective and economical. Implants of especial value in mammary carcinoma and a single implantation is sufficient for eight month's supply of hormone. Literature gladly sent on request.

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P.O. Box 845, Adelaide, S.A.

Box S1549, G.P.O., Perth, W.A.

Britain), Annette C. Fleming (to Victoria), Phillip K. Stanford (to Tasmania) and Annette R. Simmons (to New Zealand).

Report of Sub-Committee on Foreign Chemists.—Re Edith Diane Hales, Alberta, Canada.—Resolved that registration under Section 11 (e) be granted, the Board having recognised the University of British Columbia.

Re Joseph Skalski, New Jersey, U.S.A.—Certificate recognised under Section 11 (2), and applicant referred to the University.

Poisons Act.—Reports of the following deaths from poisons had been received since last meeting, viz.: 1 Cyanide, 1 Barbiturate, 1 Phenol, 1 Carbital.

Acceptance of Leaving Certificates.—4.

Indentures.—Registrations comprised 12 new indentures, 6 transfers and 2 cancellations.

Correspondence.—Canadian Pharmaceutical Association (Inc.), Toronto—Health Insurance Plans: It was decided to refer this inquiry to Mr. K. Attiwill, Melbourne.

Poisons Act—Re Ephedrine Hydrochloride.—Firm to be advised that under the present Act this product was not controlled under 1%, and that new regulations to be gazetted would exercise no control in any strength.

Hair Dye Containing Diamines.—The Board confirmed the information already given to a firm by the Registrar.

The meeting closed at 9.15 p.m.

THE GUILD

*S.B.C.
Meeting*

The State Branch Committee of the New South Wales Branch of the Guild met at Science House, 157 Gloucester street, Sydney, on July 14, at 8 p.m.

Present.—Messrs. L. W. Smith (Chairman), W. F. Pinerua, R. W. Feller, R. S. Leece, C. D. Bradford, P. Lipman and R. Frew.

Extension of Leave of Absence, Mr. O. C. V. Leggo.—It was resolved that leave of absence for a further period of three months dating from July 14, 1955, be granted to Mr. Leggo.

Trade Dinner, Usher's Hotel, September 14.—The Secretary said the menu must be selected. A decision should be made as to the persons to be invited.

It was decided to invite two representatives from each firm. In the event of neither being able to attend, then a nominee to be welcomed.

After-Hours Trading: Prosecutions.—Cases against Hudspeth, Vickers and others. Mr. Smith said that these proceeded all day on June 27, and the case against Hudspeth had then been adjourned to July 29.

State Branch Committee Elections, Nominations.—The Secretary said that the six retiring State Branch Committeemen only had been nominated, namely, Messrs. C. D. Bradford, R. W. Feller, R. Frew, R. S. Leece, Orion C. V. Leggo and W. G. Sapsford.

Poisons Advisory Committee Representative.—Mr. O. C. V. Leggo under date July 13, tendered his resignation as the Guild's representative on the N.S.W. Poisons Advisory Committee. The resignation was accepted with regret. (To be forwarded to the Poisons Advisory Committee.)

The Secretary said that the name of Mr. W. F. Pinerua had been communicated to the Poisons Advisory Committee, but no reply had yet been received.

P.A.T.A. Representative.—Mr. Feller said that the Guild had no hand in appointing the P.A.T.A. representative. The Secretary said that Mr. Lipman's name had been submitted to the P.A.T.A., as decided at last meeting.

Federal Delegate's Report.—The committeemen had received Mr. Scott's letter dated June 30, 1955.

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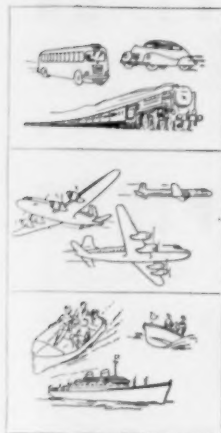
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Tell your customers what recent medical and pharmacological research and extensive tests proved about ANDRAMINE in motion sickness. Explain how the chemical compound of Chloro-theophylline with the Anti-histamine substance of Beta-dimethylamino-benzhydryl ether in easy-to-take ANDRAMINE Tablets has been proven non-toxic and free from unpleasant side-effects—is absolutely safe and effective. Help your customers beat the age-old evil of travel sickness, and earn welcome, extra profits for yourself! Stock and recommend ANDRAMINE Tablets.

ANDRAMINE Tablets for Adults, 12 for 3/6
ANDRAMINE (Junior) for Children, 12 for 3/-

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TABLETS

FOR TRAVEL SICKNESS

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NEW SOUTH WALES—Continued

Preparations Price List, 1/7/55: Brands on which the basic prices have been calculated.—It appeared that many of the prices had been calculated on the cheapest brands.

Mr. Frew said that the Department should state the brands upon which the dispensed prices were computed. (To be raised at Lismore.)

It was further stated that before items or brands became available the manufacturer should be approved and the standards to which their products must conform should be laid down. To be noted for a remit to Federal Council also.

New Members Elected.—Ronald Francis Goodwin, Peak Hill; Roger Howard Holt, Swansea; John Smedley, Dee Why; Ronald William Smith, Carrs Park; Robert Reid, Manly; William Roy Willcox, Campsie; Ronald Frank Morison, Collaroy; Lyn Newman Wilcox, Dee Why and Harry Harper, Curl Curl.

Reinstatements.—John Bowen, Gosford; John Robert Nolan, Wagga Wagga and Miss Gloria Shirley McFarlane, Newtown.

Reports of Sub-Committees were dealt with as follows:—

(A) **Trade & Commerce, Planning and Publicity:** Report of meeting held on July 7, as circulated.

Referring to the report, Mr. Feller said that the letter from Mr. Ross, dated June 27—settlement reached in "Kleenex" dispute—was the outcome of negotiations by the Merchandising Department.

Federal Trade and Commerce Conference: Remits for Agenda.—It was decided to adopt the two remits suggested by the Trade and Commerce Sub-Committee.

Mr. Feller said that the Federal Merchandising Manager would be coming to Sydney during the ensuing week and he would discuss the general conduct of the conference. Remits had been sent in from Victoria and Queensland. There would be a review of Chemist-Only lines, and the meeting would discuss retail merchandising.

(B) **Pricing:** Mr. Leece said that the Pricing Officers' Conference would be held in Melbourne on August 24 and 25. Remits were requested, and a meeting of the Pricing Sub-Committee would be held soon to look into the matter.

Dispensing Fees: Article by Mr. Nigel Manning for Publication in "Gilseal News."—It was mentioned that all committeemen had received a copy.

Ung. Menthol Co., A.P.F.: Method to be Adopted in Pricing One Ounce.—Mr. Leece said it had been decided to price it extemporaneously. The price worked out at 5/9. The dispensed price would be restored to the list of A.P.F. Preparations Commonly Prescribed.

Mr. Feller suggested that Lin. Calamine Co. should be added to this list.

Profit Margin on "Prolac."—It was decided to accept the 33½ per cent. as this line is practically a food.

Purchase of Addressograph with Automatic Envelope Feed.—The Secretary said that the new model addressed the envelopes much more quickly, having an automatic feed. It was decided to purchase the new Addressograph for the sum of £163/10/-, plus the tray-mobile at £9.

It was further decided to sell the present machine, which is in excellent order, but without automatic feed.

(C) **Repatriation, Lodge and Hospital Dispensing.**

H.C. Fund and M.B. Fund: Result of Plebiscite.—Mr. Smith said that the two schools of thought were running reasonably close together in numbers.

It was decided to await further figures before discussing the matter.

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The Secret of going Anywhere, doing Anything—
Any day of the month is known to countless
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1955 will be the biggest year in Meds history. Already, everywhere, more women
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(D) Industrial and Early Closing

Chemists' (State) Award.—Mr. Smith said this was part heard by Mr. Justice Beattie on June 23. The Judge took nothing for granted, and made his own investigation. Increases in the wages of registered employees had been granted, and these were notified in the Guild Service Bulletin. The Judge had given his interim judgment on July 1.

Arrangements had been made to confer with the Shop Assistants' Union on July 14. This conference had taken place and agreement had been reached on the scale of wages for junior employees.

Unregistered Assistants:

	Male	Female
Under 17 years	£5 16 0	£5 14 0
At 17 years	7 10 0	6 17 6
At 18 years	9 14 6	7 14 9
At 19 years	11 17 0	8 16 6
At 20 years	13 4 0	9 10 0
Shop Boy under 16 years		£2 17 6
Shop Boy under 17 years		£3 4 6

Relievers, 9/4 per hour—minimum payment of four hours.

Casuals, 7/11½ per hour—minimum payment of £1/16/8.

Students, 7/6 per hour, with a minimum payment of twenty hours.

Casuals: If engaged on a daily basis the rate shall be £2/15/-.

Mr. Smith said that the hearing of the Chemists' (State) Award matter would proceed after the law vacation. The award would come up for a complete review of the industry. It would be necessary to get considerable evidence to obtain an alteration in the proportion clause which had been in the award for many years.

Correspondence.—Federal Secretary: (1) Advising that the annual meeting of Federal Council will be held in Melbourne from October 17 to 20. Remits to reach Federal Office by August 17. Mr. Smith said that remits would be discussed at next State Branch Committee meeting. This would be the last opportunity to do so. He was of the opinion that the powers of the Committee of Inquiry should be considerably widened.

(2) Re State Branch By-laws. Forwarding the Guild solicitor's views on the N.S.W. State Branch By-laws. The revised copy of by-laws to reach Federal Office prior to the Federal Council meeting.—Noted.

Mr. D. I. Williams, St. Peters, complaining about the extremely unbusinesslike method used to provide members with (a) the fact that there is an election of officers and (b) the necessary form on which nomination can be made. The matter should have been the subject of separate correspondence and members notified of the impending elections in an official manner. This would create some interest at least. The manner in which it was presented is "a very shabby and penny-saving method and an insult to both candidates and electors."—Noted.

Mr. Keith Jordan, London, giving impressions of countries visited during recent trip on the Continent.

Lift in "Science House."—The Secretary said he had heard on good authority that the lift would be out of action for five weeks while certain alterations were made to the floor. The business of the Guild could not proceed properly with the lift out of order for such a long time. The President of the Master Printers' Association had suggested that the Management Committee of Science House be offered a sum of £200 by the tenants conjointly so as to compensate for the extra cost of carrying out the lift alterations at night time.

It was decided that the Guild would pay its fair proportion of the £200 in order to preserve the working of the lift during the day-time.

The meeting concluded at 11.05 p.m.

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Representatives in All States:

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TASMANIA: H. T. Grounds, 152A Collins Street, Hobart. B 3511, B 2370.

VICTORIA: John Kiddell, 458 Beech Road, Beaumaris, S.10. XF 4641, WX 2367, MB 2111.

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VICTORIA

PERSONAL and GENERAL

State News

Members in Victoria desiring publication of personal items of interest are invited to write or telephone details to the Editor (FJ 5161).

Mr. H. J. B. Dixon has been appointed manager of Mr. J. T. Hocking's pharmacy, Lockington.

Mr. R. L. Glazier is now in charge of the dispensary at the Lort Smith Animal Welfare, in place of Mrs. Fricker.

Mr. J. K. Trinder and his wife, Mrs. Valerie J. Trinder, have opened a pharmacy at 117 Vines road, Geelong West. They are trading as "Trinder's Pharmacy."

Miss G. M. Fleming will be leaving on the "Orsova" for Great Britain on October 25. She expects to spend about 12 months abroad, and will visit the Continent.

Engagement.—The engagement of Enid Noel Baxter, of Geelong, and Geoffrey Malcolm Oscar, of Caulfield, was announced on August 6. Attending lectures together, they both qualified in November of last year. Marriage plans are not definite, but will take place in about 15 months' time.

MANAGERS AND RELIEVERS: AUGUST LIST

Reliever	Pharmacy
F. Anderson	Taylor & Taylor, Ballarat.
W. Barber	J. B. Kay, Wangaratta.
Mrs. E. M. Barton . . .	C. S. D. Holloway, Berwick.
	Miss P. E. Penfold, Surrey Hills.
I. Benporath	B. J. Daniel, E. Camberwell.
	P. Bartold, Healesville.
J. W. Digby	U.F.S. Dispensary, Fitzroy.
	U.F.S. Dispensary, Glenhuntingly.
H. J. B. Dixon	E. J. Wilson, Wangaratta.
C. D. Everett	J. Shannon, Warragul.
F. F. Eddie	J. T. Hocking, Lockington.
Miss K. A. Gartlan . .	D. V. Ray, Colac.
B. C. Hornby	N. E. J. Zerbe, Hampton.
Miss Jones	D. Tait, Melbourne.
J. G. Kellas	R. S. McKee, Port Melbourne.
	Mrs. Quinton, Malvern.
C. B. Lennon	U.F.S. Dispensary, St. Kilda.
Miss B. E. LePage . .	R. J. Leith, Redcliffs.
Miss M. Noonan . . .	C. M. Pleasance, Prahran.
	E. G. Heriot, Moonee Ponds.
Miss N. R. Pedrazzi . .	Miss E. Thompson, Thornbury.
	Master's Pharmacy, Castle-maine.
	Miss Downton, Mid. Brighton.
	Alfred Hospital, Melbourne.
	J. E. Coates, Preston.
	L. Long, Toorak.
	D. Grey, Croydon.
Miss F. Proctor	Mrs. G. Tostevin, Nth. Balwyn.
A. B. Rundle	E. J. Wilson, Wangaratta.
	J. B. Kay, Wangaratta.
	Miss M. Sharp, Myrtleford.
A. Redapple	U.F.S. Dispensary, St. Kilda.
Miss Rushbrooke . . .	P. M. Balding, Mansfield.
	Geelong Hospital, Geelong.
A. Saunders	E. H. Baker, Warragul.
J. L. Sest	U.F.S. Dispensary, Bentleigh.
R. E. Stredwick	K. A. M. Wellington, Mitcham.
S. Schwarz	M. H. Lawson, East Coburg.
Mrs. J. Stuchbery . .	F. J. P. Malcolm, Portland.
	J. R. Creelman, Portland.
G. Tait	A. H. A. Matthew, Beaumaris.

Reliever	Pharmacy
C. W. Trethowan . . .	U.F.S. Dispensary, Ararat.
	Masters' Pharmacy, Castle-maine.
Mrs. P. Woodgate . . .	Bond's Pharmacy, Wycheproof.
	Dickins & Dickins, Geelong.
	J. G. Bloore, W. Brunswick.
	B. L. Jacobson, Box Hill.
	H. A. P. Amkerson, Caulfield.
Miss C. Younes	Queen Victoria Hospital, Melbourne.

BUSINESS CHANGES

Mr. J. B. Robinson has disposed of his share in Central Pharmacy, Traralgon, to Alan and Noel McKinnon. The pharmacy will now be conducted by Mr. A. J. Riddiford and the McKinnon brothers.

Mrs. E. P. Poelman has opened a new pharmacy at Springfield road, North Blackburn. Miss E. Prendergast will act as manager.

Mr. A. R. Pask has purchased Bristow's Pharmacy, Elizabeth street, Melbourne, from Mr. R. V. Khyat, and has appointed Mr. J. C. Spencer as manager.

Mr. J. D. Ritchie has taken his wife (nee D. J. Adams) into partnership in the pharmacy at Maryborough.

Mr. K. D. Liddell has opened a new pharmacy in Ely street, Wangaratta, and has appointed Mr. G. Naismith as manager.

New pharmacies have been opened at the addresses indicated: Mr. and Mrs. G. E. Hayes, Mt. Dandenong road, Kilsyth; Mr. G. Rogers, 11 Coleman parade, Syndal; Mr. A. N. Barcham, 71 Mackie road, East Bentleigh.

The following pharmacies have changed hands:—

Mr. A. Miller has purchased from C. H. Gaunson, East Prahran. Mr. J. A. Ware has purchased from Estate G. R. Ramsay, Seymour. Mr. S. C. Kerr has purchased from M. Goodman, St. Albans. Mr. B. B. Brown has purchased from Mrs. M. Wheeler, Ascot Vale. Messrs. P. Bartold and R. L. Lowell have purchased from S. W. Proctor, Warburton. Mr. D. C. Lawrence has purchased from Estate A. L. Noye, 486 Bourke street, Melbourne. Mr. G. W. Oliver has purchased from L. M. Knight, Brighton.

WEDDING OF CHEMISTS

On July 30, at the Frank Paton Memorial Presbyterian Church, Deepdene, Miss Judith M. Muntz, Ph.C., and Mr. E. Barry Dean, Ph.C.

Bridesmaids were Miss Barbara Muntz and Miss Susan Wadsworth. Best man was Mr. Harry E. Davies, Ph.C., and the groomsmen Mr. Darrel T. Davis, Ph.C.

After honeymooning at Mildura, Mr. Dean will return to the Royal Melbourne Hospital and Mrs. Dean to the Alfred Hospital.

OBITUARY

David J. B. Tait

We regret to announce the death of Mr. David J. B. Tait, which occurred on July 23, at the age of 73 years. Mr. Tait was born in Edinburgh, Scotland, and arrived in Australia at the age of eight years. He entered upon apprenticeship in pharmacy in 1898, qualifying in 1901 with the winning of the Gold Medal and other prizes. He worked at D. R. Long's pharmacy, Bourke street, Melbourne, and later at Henry Francis & Co. In 1906 he purchased the pharmacy of Mr. Harold Retchford at Mornington, and in 1914 opened a new pharmacy

in Flinders street, Melbourne, in Commerce House, which he conducted for 22 years. In 1937 Mr. Tait opened a pharmacy in Flinders Way Arcade, and carried this business on, almost until the time of his death, in association with his son, David C. Tait, who also is a qualified chemist in Victoria. We express our sympathy to relatives of the late Mr. Tait.

CAPTAIN PRETTY FAREWELLED

Captain E. W. Pretty, who has been with the Southern Command Headquarters as assistant to the Chief Pharmaceutical Officer, Lt.-Col. T. H. Gay, transferred to take charge of the Depot Medical Stores at Maroubra, New South Wales.

On August 11 a number of members of the Victorian Chemists' Sub-Branch of the R.S.S. & A.I.L.A. had dinner at the Masonic Club, Melbourne, and at an informal gathering after the meal made a presentation.

Mr. Leslie B. Allen, President of the Sub-Branch, proposed the health of Captain Pretty, and spoke in high terms of his service to the Sub-Branch as a committeeman and later as Secretary. Bill Pretty, he said, had assisted to keep the branch afloat. His pals would miss him, and they wished him luck in his new job.

Lt.-Col. T. H. Gay added his congratulations. He emphasised particularly Captain Pretty's unswerving loyalty in his work. His move, he said, was in the interest of the Service, and should be also in Captain Pretty's interest.

Captain Pretty responded suitably.

KODAK TRAVELLING SCHOLARS ENTERTAINED

Mr. Edgar Rouse, Chairman of Directors of Kodak (A'sia) Pty. Ltd., was host at an informal dinner party arranged in honour of Mr. Jim Manning, winner of the first Kodak Travelling Scholarship, who recently returned to Melbourne after two years abroad, and Mr. George Landers, winner of the second Kodak Travelling Scholarship, who left Melbourne on August 13 on the "Otranto" to take up studies under the scholarship.

Associated with Mr. Rouse at the function were Mr. R. J. Mitchell, Sales Director; Mr. F. Manning, Assistant Sales Manager, and Mr. H. Wonson, Manager of the Melbourne Branch. Guests included Mr. A. T. S. Sissons, Dean of the College of Pharmacy; Dr. Byron L. Stanton, Lecturer in Pharmacy; Mr. Nigel C. Manning, Lecturer in Pharmaceutics; Mr. A. W. Callister, Examiner for the Pharmacy Board and former Lecturer in Pharmacy; Mr. A. J. Cobcroft, Lecturer in Chemistry, representing the Victorian College of Pharmacy; and Mr. H. A. Braithwaite, President of the Pharmacy Board of Victoria; Mr. Eric Scott, Acting President of the Pharmaceutical Society of Victoria; Mr. S. J. Baird, Hon. Treasurer of the Council of the Society; Mr. K. G. Attiwill, Director of Pharmaceutical Public Relations; Mr. T. B. Evans, Federal Secretary of the Guild; and Mr. R. G. Ross, Merchandising Manager.

In proposing the toast to the two scholarship winners, Mr. Rouse said it would be difficult to select two young people better qualified for the scholarships than Jim Manning and George Landers.

He complimented Mr. Manning on the manner in which his project had been covered, and expressed the hope that before long they would hear something of interest from Mr. Manning in relation to his experiences and observations overseas.

Mr. Rouse complimented Mr. J. G. Landers on his selection as the second Kodak Travelling Scholar. He trusted Mr. Landers would derive much knowledge and pleasure from his studies abroad, and would return to his home land better equipped to render service in some sphere of pharmaceutical activity.

Mr. Nigel C. Manning supported the toast. He commented on the abilities of both the Kodak Scholarship winners in differing fields and in differing ways. He spoke appreciatively of the fine gesture of Kodak in



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High-Grade Malt Extract, Fine Old Wine, etc.

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Suppliers for—

New South Wales—Wm. Delany & Co., Sydney; Elliotts & Australian Drug Pty. Ltd., Newcastle; Taylor Elliotts Pty. Ltd., Lismore.
Queensland—Taylor Elliotts Pty. Ltd., Brisbane, Rockhampton, Townsville, Cairns.
South Australia—A. M. Bickford & Sons Ltd., Adelaide.
West Australia—Felton Grimwade & Bickfords Ltd., Perth.
Tasmania—Irvine McEachern (1934) Pty. Ltd., Launceston; F. Fairthorne & Sons, Hobart.

Sole Proprietors, Wholesale Only:

ARNOLD BROS.,

527-529 Little Collins Street, Melbourne.

To all Chemists . . .

THARS

**ANTISEPTIC
POULTICE OINTMENT**

is now available from all
WHOLESALE DRUGGISTS

Satisfied users are publicising its healing qualities.
Daily demand is increasing.

Keep Good Stocks—Order NOW!

If you work for it—it will certainly work for you and earn good profits. You can recommend and sell it to every householder—it will never let you down.

SOLE AGENTS:

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ROYCO COMPLETE SERVICE

Sales Promotion Division: Window Displays • Showcards—designs and copy • Posters • Ticket-writing • Signwriting • Silk screen printing.
Constructional Division: Shop fitting—store layout • Display units • Cut-out letters (any material) • Exhibition stands • Window units.

VICTORIA—Continued

providing the scholarships, and thanked Mr. Rouse for his great interest in the advancement of pharmaceutical education.

Mr. Jim Manning, in responding to the toast, presented an interesting account of some of his overseas experiences. He emphasised the great help given to him by the pharmaceutical authorities in Great Britain and the hospitality extended to him wherever he went.

Mr. George Landers, in suitable terms, referred to some of the work he proposed to take up in his project, which had been approved by the Federal Council of Pharmaceutical Societies. He said he looked forward with pleasure to the experiences which were ahead of him. He, too, wished to thank Kodak for the opportunity presented to him, and gave an assurance that he would do his best to comply with the conditions of the scholarship, thereby proving to the selectors that their judgment had not been at fault.

VICTORIAN CHEMISTS GOLFERS' CLUB

Kingston Heath Outing

Members enjoyed a round at Kingston Heath on July 19, in ideal weather—slightly wet under foot, no wind, a lowering sky; a typical Melbourne grey day, with periods of sunshine—ideal for golf.

There was a strong field and keen competition, and it was most enjoyable playing our way down the avenues of trees. Wattles resplendent in golden sprays showed out markedly through the bush, and foretold the early approach of spring and warmer weather.

Results of the grades were as follows:—

A grade was won by Alex Hallett with 38 points stableford; B grade by E. Beacham, our president, with 34 points; C grade by Ben Haigh with 35 points.

After the presentation of trophies, our President thanked the committee and management of Kingston Heath for their hospitality, and thanked the members for their support to the Chemists' Club. He outlined the extensive programme arranged for the coming season, which begins on August 1, as follows:—

Tuesday, August 16: Royal Melbourne Golf Club.

Tuesday, September 13: Commonwealth Golf Club.

Annual Meeting: Tuesday, September 20, 9 p.m., preceded by annual dinner at 6.30 p.m.

Tuesday, October 25: Chemist and Druggist open day at Woodlands.

Tuesday, December 6: Barwon Heads.

March 18 to 24, 1956: Interstate visit by N.S.W. and Queensland.

Meeting at Royal Melbourne

Chemist Golfers held a meeting at Royal Melbourne Golf Links on August 16. This was greatly enjoyed by all on account of the delightful day following the inclement weather of the previous afternoon and evening.

Breaking dull, the weather turned on a veritable spring day with sunshine and excellent playing conditions. Royal Melbourne course certainly stands up to bad conditions, and the sandy ground quickly absorbs the heavy rain, making golf quite pleasurable.

The A Grade was won by Bob Hill with 34 points Stableford.

B Grade by A. O. Dixon with 38 points.

C Grade by Darcy Sykes with 25 points.

We congratulate Royal Melbourne on the excellence of its course and hospitality extended to us, and hope to have further matches there in the future.—R. W. Brodrick.

Annual Meeting

The Chemists Golfers Annual Meeting will be held on Tuesday, September 20, at the Danish Club, Albert Park.

R. W. BRODRICK, Hon. Secretary.

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The projection of colour slides and visual aid teaching requires a projector that can project a clear image in semi-daylight conditions. The Waterworth is able to do this.

Remember: Your colour slides are more realistic when projected.

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WITH RESIDENCE**

Turnover: £7800, and open to increase.
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£1000, which includes W/W carpets in
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A modern shop erected six years.

RENT: £5/10/- per week—Lease.

Price: £4600, which includes stock
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2 Miles of Melbourne.

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Plant value—£1500, approx.

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Also another Pharmacy Business taking
£14,000, based mainly on prescription
trade.

Full details on application personally or
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CITY PHARMACY BUSINESS

WINFIELD-LEWIS ESTATES PTY. LTD. advise that the business advertised on page 764 of the July issue has been sold. We have several buyers wanting comparative businesses and would be interested in contacting prospective sellers.

Sole Agents:

WINFIELD LEWIS ESTATES PTY. LTD.

125 Flinders Lane, Melbourne, C.I.

Phones: MF 6096 and 6197.

Camberwell Branch: BX 2337 and 2338.

After Hours: XY 1873 or LF 7120.

DISCUSSION GROUP: RECORD ATTENDANCE

A record-breaking group of over three hundred members was in attendance at the College of Pharmacy on August 10, when Mr. Nigel Manning, B.Sc., F.P.S., was guest speaker, his subject being the new A.P.F.

Mr. Manning opened the discussion by a short reference to the earlier editions of the A.P.F., and showed what great advances had been made in past years, which were highlighted by the presentation of the 1955 Formulary.

Some features of the 1955 A.P.F. explained by Mr. Manning were as follows:—

(i) The Antidote Table had been completely rewritten, and a suggestion is made that at least one "Poisoning Emergency Cupboard" should be provided by metropolitan pharmacists in each municipality.

(ii) Creams are a feature of the book, and are listed as follows:—

A. Emulsion Types:

- (1) **Oil in Water (Water Miscible)**—
Cremor Triethanolamine Aquosus.
Cremor Monostearini Aquosus.
Cremor Cerae Aquosus.

These bases are suitable for such drugs as antibiotics, sulphonamides, water soluble dyestuffs, water soluble local anaesthetics and antihistamines, etc., provided the ionic components of emulgent and medicament are compatible.

Water in Oil Creams:

- Cremor Cholesterolis Oleosus.
Cremor Cerae Oleosus.
Cremor Simplex Oleosus.

Water in oil creams are suitable for such drugs as oil soluble local anaesthetics, oil soluble antiseptics, local protectives, rubefacients, etc. These creams may be affected by the presence of strong electrolytes.

B. Ionic Characters:

- (i) Anionic Creams.
- (ii) Cationic Creams.
- (iii) Non-ionic Creams.

Anionic Creams.

These creams contain emulgents which yield large anions, and a suitable type is Cremor Cerae Aquosus. They are potentially incompatible with cationic drugs.

Cationic Creams.

These creams contain emulgents which yield large cations, and a suitable type is Cremor Cetrimidi Aquosus. They are potentially incompatible with anionic drugs.

Non-Ionic Creams.

These creams contain emulgents which yield virtually no ions. These creams are widely compatible with both anionic and cationic drugs. A suitable non-ionic cream is Cremor Sorboleni Aquosus.

(iii) A feature of the Ophthalmic Section is the fact that there are included no less than a choice of eight ophthalmic vehicles, three of which contained preservatives, and a corresponding group made isotonic and buffered.

The necessity for careful preparation of all eye drops was stressed, such as the use of first-quality ingredients and all the other phases of the procedure, such as containers and apparatus used to be well washed and immersed in boiling water, both for at least ten minutes, then to proceed with all phases of the preparation, which results in the final product being a completely sterile eye drop solution.

Special mention was made of Guttæ Fluoresceini, A.P.F., because profuse growth of pathogenic bacteria is likely in these drops. All the eye drops in this section must be dispensed in dropper bottles to minimise contamination during use.

(iv) It was interesting to note that the Syrup Glycero-phos. Co. of the new A.P.F. has an alkaline reaction, which replaces the acid reaction of the former type. This would allow Sodium Phenobarbitone to be mixed with it without precipitation.



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The same prompt, efficient service that has been available to N.S.W. chemists for the past four years from Chemists' Account Service, Sydney, is now available to Victorian, South Australian and Tasmanian chemists through an associate office of this Australia-wide organisation, recently established in Melbourne.

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P.B.A. & P.M.S. scripts

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especially Arthritic and Fibrositic Conditions and
Gout, particularly in the chronic stage.

LEUCOTROPIN

has an immediate analgesic,
antiphlogistic and antipyretic
effect and increases Joint Mobility

Leucotropin causes excretion of Uric Acid
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Manufactured by Silfen Ltd., Hatfield, Herts, England

GOUT

is an Arthritic condition
but do your customers know it?

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for instant relief

Wholesale, 6/4; Retail, 9/6

Your Profit, 3/2

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VICTORIA—Continued

When Aneurine Hydrochloride is prescribed with Syrup Glycerophos Co., the preparation will be acidified by the addition of 1 min. of Dilute Hydrochloric Acid to each 60 mins. of the syrup.

(v) Provision is made in the new A.P.F. for Sterile Bentonite and Talcum Powders, which are sterilised by being maintained at a temperature of 150° for at least one hour. This is to prevent these powders from being contaminated by tetanus spores.

(vi) Mr. Manning suggested that steps should be taken by pharmacists to supply samples of the more important products to their local medical men.

(vii) A therapeutic index is a new feature of the A.P.F., which enables the medical man access to the contents of the book more readily than was the case with past issues.

Mr. Manning during his address paid a tribute to his co-workers on the new A.P.F., namely, Mr. A. W. Callister, Dr. Byron L. Stanton and Mr. E. E. Nye, as well as the many other people associated with the contribution to various sections of the book.

The great interest of the members present was shown by the large number of questions addressed to Mr. Manning, lasting for more than an hour.

At the conclusion of the meeting Mr. Geoff Leete, the Vice-President of the Discussion Group, at the request of Mr. John Oxley, the President, extended to Mr. Manning a vote of thanks on behalf of those present, and this was greeted by sustained applause.

—John S. Baker, Hon. Secretary.

PHARMACY BOARD

Monthly Meeting

The Pharmacy Board of Victoria met at 360 Swanston street, Melbourne, on August 10, at 10.15 a.m.

Present.—Mr. H. A. Braithwaite (President) in the Chair; Messrs. S. J. Baird, A. W. Callister, W. R. Iliffe, N. C. Manning, A. W. McGibbony, W. Wishart, and the Registrar.

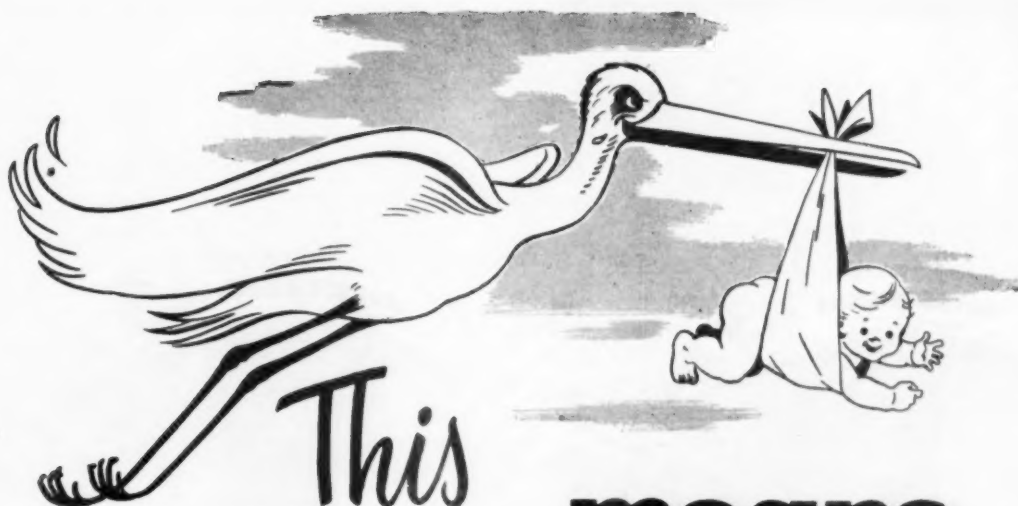
Methylpentynol.—Mr. Baird inquired whether any further action had been taken. The President said that a letter had been sent to the Pharmaceutical Society of Great Britain seeking information on the position overseas. It was resolved that the Board await a reply to this communication.

Addict.—Mr. McGibbony asked a question as to whether there had been any development in relation to a report at the last meeting concerning a reputed addict who had been obtaining large supplies of drugs. The President said the matter had been referred to the Drug Bureau.

Registration.—The President inquired if a country pharmacist whose registration had not been renewed at the date of the last meeting had since applied for renewal. The Registrar stated that an application was before the Board at this meeting.

Display Sign. "Chemistry".—The Registrar reported that legal opinion had been obtained to the effect that display of the word "chemistry" on the window of a store in which medicines were displayed for sale could be construed as an offence under the Medical Act 1928 Part III. The Board directed that the proprietor of a store on which the word was displayed should be instructed to remove it.

Dispensary.—In reply to a question the Registrar stated that as instructed previously the Board's solicitors were proceeding to institute legal action against a dispensary which had allegedly been left in charge of an unqualified person. A communication had been received from a Member of Parliament in reference to this matter, and the position had been explained to the Member.



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**Growing
BIGGER and
BIGGER
every year!**

Like Doc. Stork's, our business, too, goes on increasing year after year. For instance, our sales records for the last three years have scored an all-time high . . . and we're still growing.

*That's why the partnership of
YOU and JOHNSON'S means
business!*

Johnson & Johnson
PTY. LTD.

Takes his job seriously, does old Doc. Stork . . . and why not? After all, he's been in business a very long time, and he's still delivering new babies every minute of every day.

That means business, if you like, because all babies know that some of the nicest things about this new world of theirs are the things that Johnson's make: Baby Powder, Baby Cream, Baby Oil, Baby Soap . . . all so comfort-giving, so happy-making. No wonder they are products that sell fastest and sell continuously.

Get **YOUR** full share of this growing business, too! Display *all* your Johnson's Baby Products *together*, because that's how they work best and sell most rapidly.



**Johnson's
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against winter ailments of the rheumatic group, etc., has been launched on behalf of **DR. MACKENZIE'S MENTHOIDS and MENTHOID CREME**. High frequency radio announcements over all Radio Stations, regular advertising in Daily and Sunday Press, Women's and National Magazines are all selling the double home treatment—**MENTHOIDS** to treat the cause and **MENTHOID CREME** to give immediate relief from pain. Make sure your stocks are right to meet winter's demand. Remember, every sale of **MENTHOIDS** can mean a sale of **MENTHOID CREME**. Boost YOUR sales by the double attack!

★ Attractive Display Material, Counter Leaflets and Ready-serve Dispenser Racks available on request.

Get your share . . . of the extra profit available on B.M.L. products by buying in £10 (or more) parcel lots.

There's an extra 7½% for you on an assorted parcel of:—

MENTHOIDS, MENTHOID CREME, FORD PILLS, YOUTH-O-FORM, PRESSOR SALT, CURLYPET, KANATOX, NUXOIDS, FORD INHALER, Etc.

British Medical Laboratories Pty. Limited

87-91 CLARENCE STREET, SYDNEY

Correspondence.—Correspondence submitted to the Board included the following:—

To the Pharmaceutical Society of Great Britain forwarding Certificate of Identity in favour of Donald H. Mellor.

From Department of Health notifying gazettal of addition of Dieldrin, etc., to Fourth Schedule.

From the Department of Health notifying gazettal of Thiacezazone, etc., as additions to the Sixth Schedule paragraph (1).

From the Secretary, Department of Health, notifying gazettal of Dihydrohydroxymorphine, etc., as additions to Sixth Schedule part (1).

From the Secretary, Department of Health, notifying gazettal of amendment to Second Schedule (water soluble synthetic cocaine substances).

From S.A. Branch of the Guild inquiring what restrictions operate in regard to antihistamine drugs for control of motion sickness.

Cutting from "The Australasian Grocer," July 20, 1955, publishing notes on requirements of Poisons Act and Regulations in relation to sale of poisons and poisonous substances.

To the Secretary, Department of Health, forwarding copy of Annual Report of Board for year ended December 31, 1954.

From the solicitors for the executrix of the will of the late G. H. Cooke, Mont Albert, applying for permission to carry on pharmacy under a registered pharmaceutical chemist. Permit for six months granted.

From an apprentice submitting Statutory Declaration regarding loss of Fourth Year Volumetric notebook from the College of Pharmacy. Declaration accepted.

From an apprentice seeking permission to sit for the Final Examination in November, 1955. The application indicated that because of ill-health apprenticeship had been suspended and some of the Fourth Year lectures missed. The Board resolved that it be suggested to the applicant that the request be resubmitted later in the year.

From a country chemist asking if permission could be granted for the pharmacy to remain open with his wife in attendance for one half day each week while he visited outlying town for the purpose of dispensing prescriptions. To be advised that the Board has no authority under the Medical Act Part III to grant such permission.

From the manager of a country branch pharmacy reporting discrepancies in Dangerous Drugs records on his taking over. The Registrar said that the Police had visited this pharmacy and had submitted a separate report.

From a number of chemists replying to letters from the Board, and undertaking in future to comply with the requirements of the Poisons and Dangerous Drugs Regulations.

From a chemist who had gone out of business forwarding list of Dangerous Drugs sold to another chemist in practice. Registrar said the Inspector had been given a copy of the list with instructions to check the transaction.

Uniform Schedules.—A letter was received from the Department of Health enclosing copies of a report of a sub-committee of the National Health and Medical Research Council on proposals for uniform poisons schedules throughout the Commonwealth. After discussion it was resolved that the Board indicate its willingness to co-operate towards this end. It was agreed also that the Board's willingness to confer with representatives of administrative bodies in other States if that was considered desirable and practicable be communicated to the Department.

Chemists Before the Board.—Two chemists appeared before the Board following reports from Inspector Ahern of irregularities in relation to the observance of Poisons and Dangerous Drugs Regulations when he inspected the pharmacies. Both were called upon for explanations of the matters alleged, and after these

P. D. L.

An insurance "must"
for the chemist in business

Membership confers—

- Cover against claims arising from errors in dispensing.
- Corporate protection in matters of principle affecting the profession as a whole.
- Legal advice on questions of law concerning a member's business.

Chemist's Indemnity cover can be arranged for amounts between £1000 (minimum) and £5000. Premium and membership subscription range from as low as £2/6/- p.a., depending upon the amount of the cover and number of persons engaged.

The P.D.L. financial year commences on October 1, and the present is therefore a convenient time to join.

For full details write to:

PHARMACEUTICAL DEFENCE LIMITED

HEAD OFFICE:

FOURTH FLOOR, "Guild House,"
24-26 Saint Francis Street, Melbourne,
Telephone: FB 3774

(General Secretary, T. G. Allen.)

N.S.W.: 53 Martin Place, Sydney.
(Branch Secretary, C. Carlisle.)

QUEENSLAND: Drysdale's Chambers, 4 Wickham
Street, Brisbane.
(Branch Secretary, Miss D. Brighouse.)

SOUTH AUSTRALIA: Churchill Building (First
Floor), 61-63 Gawler Place, Adelaide.
(Branch Secretary, O. H. Walter.)

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LA 3180

HOBART: H. T. GROUNDS, 4 Victoria Street. Phone:
Hobart 3511.

VICTORIA—Continued

had been given the two chemists were admonished by the President. Both promised to observe the Regulations fully in future.

Dangerous Drugs Schedule.—An application was received from Fawns & McAllan for exemption of the preparation "Ticarda" from the operation of the Dangerous Drugs Schedule as a result of a recent addition to the Schedule. Numerous authorities were quoted in support of the application and to show that the preparation was not likely to give rise to addiction.

The President pointed out that it would be difficult to accede to the request, as there was no machinery by which a drug or preparation could be removed from the Schedule of Dangerous Drugs once it had been placed there. The only method was by alteration of the Schedule as part of the Act in Parliament. It was resolved, however, that the matter be referred to the Poisons Schedules Advisory Panel for consideration.

Sodium Thiosulphate Solution.—A chemist reported that he had found it impossible to obtain sodium thiosulphate solution in ampoules as recommended in the cyanide treatment chart issued by the Board to persons licensed to purchase cyanide for industrial and mining purposes. It was resolved that the matter be referred to the Poisons Schedules Advisory Panel for advice.

Application for Specified Drugs.—An application was received from a private firm for permission to have certain Specified Drugs in possession for purposes of research. The application was refused.

Interview with Director-General of Medical Services.—The President reported that he, in company with the Acting President of the Pharmaceutical Society and the Registrar, called on Major-General Refshauge, Director-General of Medical Services, R.A.A.M.C., and had discussed a number of matters relating to pharmacy. Among other things, General Refshauge had suggested that first-aid be incorporated in all pharmaceutical curricula as a compulsory subject. Every apprentice, he suggested, should have some positive training which could be applied in time of local or national emergency. The President said he thought the Acting President of the Society would take the matter up with the Society's Education Committee.

Control of Antihistamines.—A communication from the Pharmaceutical Society of Victoria suggesting that antihistaminic preparations for control of motion sickness should be removed from prescription restriction was received. It was agreed that this matter should again be referred to the Poisons Schedules Advisory Panel.

Financial.—The Honorary Treasurer submitted the monthly financial statement, and accounts totalling £413/17/5 were passed for payment.

Adjournment.—The Board adjourned for lunch from 1.45 p.m. to 2.15 p.m.

Proprietary Medicines Regulations.—Mr. McGibbony inquired if the Board had any suggestions to offer in relation to revision of the Proprietary Medicines Regulations which were under review in the Department of Health. The Board considered the matter at some length, but did not make any positive suggestions in regard to the Regulations.

August Final Examination.—Arrangements for the conduct of the examination and attendance of Board members for the practical and oral examinations commencing on August 29 were discussed and finalised.

Pharmacy-Science Courses, Universities Commission.—The Registrar reported that a request had been received from the Education Office at the University as to the possibility of dovetailing courses where University Commission grants were made to students to undertake a combined Pharmacy-Science course. It was stated that two applications were at present under consideration. It was resolved that a committee con-



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Women are choosy about a thing like sanitary belts. They know just how much they contribute to comfort and confidence on "those" days. That's why Kotex gives your customers a choice of FIVE belt styles and types. Women appreciate this — and the fast-moving sales

figures show it. Kotex belts are high profit items. Are you giving women a chance to exercise their full choice—is your Kotex belt dispenser stocked with all five Kotex belt types —is it displayed where women can help themselves? It's in your interests—check up now!



This dispenser sells best when it is full — a long-proven quirk of buyer psychology. Don't let yours get down and non-selling.

ADVERTISING PUSHES BELTS HARD

Half-page ads like these are telling your customers the "belt for everyone" story. You'll reap the profits if you remind them about it once they are in your store. Try to make a Kotex belt sale with every packet of Kotex.

Are you in the know?

QVOT FEMINAE TOT SENTENTIAE

—femininity ☐ Woman in fields?

☐ A stick in your dress waist? ☐ There's a Kotex belt just for you!

Read for yourself Kotex belts are more 29 everywhere

This advertisement appears in "The Australian Women's Weekly" and in metropolitan newspapers

RAISING YOUR SALES!



This Horlicks Advertisement - carrying an every-day drama about every-day people - will be seen by more than 1,228,000 people THIS YEAR!

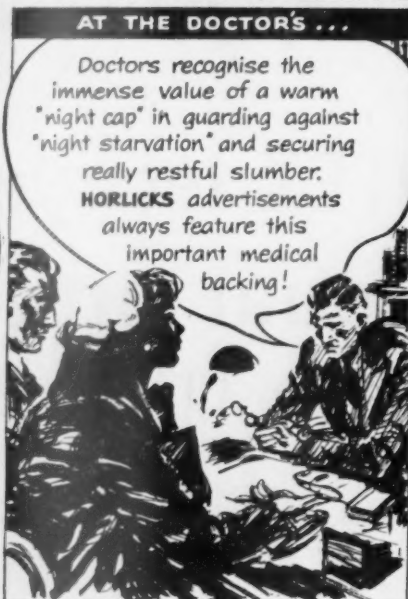


Yes! And the HORLICKS story will be repeated another 89,737,542 times, this year over the Australian Radio network



The stress and strain of life, today, shows up in most people as nervousness and fatigue...

... Only good healthy, sound sleep can keep you up to the mark...



AT THE DOCTOR'S ...

Doctors recognise the immense value of a warm "night cap" in guarding against "night starvation" and securing really restful slumber. HORLICKS advertisements always feature this important medical backing!



AND SO EVERY NIGHT...

More and more people are making HORLICKS a regular habit...

... A most profitable habit - for them and the retailer!



SOME TIME LATER ...

People are really interested in how others solve their daily problems...

- Read this ad. as it appears in the daily press...

... see how HORLICKS sells!

If you haven't already seen it, you'll be reading the real story contained in this advertisement soon — it will be carried by 1,228,000 newspaper copies this year! And 89,737,542 Horlicks sales messages will be broadcast this year. To you, the Retailer, these figures add up to one answer: more sales, and more profits from Horlicks. More customers will be entering your shop with the name "Horlicks" in their minds — looking for the protection against rest-robbing Night Starvation which only Horlicks promises. Make sure that they can translate thought into action — buying-action — by displaying Horlicks prominently and increasing your stocks. Always remember...



ONLY

HORLICKS

GUARDS AGAINST NIGHT STARVATION

sisting of Messrs. A. W. Callister, N. C. Manning and A. T. S. Sissons (Examiner in Chemistry and Dean of the College of Pharmacy) be appointed to report on this matter.

The meeting closed at 2.55 p.m.

PHARMACEUTICAL SOCIETY

Council Meeting

The Council of the Pharmaceutical Society of Victoria met at 360 Swanston street, Melbourne, on August 2, at 9.30 a.m.

Present.—Mr. E. Scott (Vice-President) in the Chair; Mrs. P. A. Crawford, Messrs. S. J. Baird, L. A. Hamon, A. L. Hull, F. W. Johnson, L. Long, V. G. Morieson, G. H. Williams, F. C. Kent (Secretary) and T. G. Allen (Minutes Secretary).

Messages of Sympathy.—On the suggestion of Mr. Long, it was resolved that messages of sympathy be forwarded to Mr. I. J. Thompson and Mr. A. G. Davis, who were prevented by illness from attending the meeting.

Correspondence.—Correspondence submitted to the Council included the following:—

To Mr. R. H. Clyne conveying sympathy in recent bereavement.

To Mrs. E. Cooke conveying sincere sympathy in death of her husband.

To Mr. David C. Tait conveying sympathy in death of his father and requesting notes concerning his life for publication in the Journal.

From a member forwarding a German prescription for translation. Translation obtained and forwarded.

To Miss Mary J. McNamara, Hon. Secretary, Victorian Pharmacy Students' Association, advising Council willing to accept suggestion that 25 per cent. of donations be used for expenditure on student amenities.

From Hospital Benefits Association of Victoria enclosing new application from proposed. Copy forwarded to Pharmaceutical Service Guild with request for comments.

To Mr. J. G. Landers advising that Council had granted him leave of absence for two or three years; expressing appreciation of his work and advising intention to continue payments to superannuation scheme.

To Appeal Director, University of Melbourne, Centenary Appeal, forwarding donation of £10/10/-.

Letter from Canadian Pharmaceutical Association asking for information concerning effect of National Health Insurance on Pharmacy in this country. Forwarded to Pharmaceutical Service Guild.

Distribution of A.P.F.—In accordance with the directions of the Council at the previous meeting, a letter was sent to the Victorian Branch of the Guild asking if the Guild would be prepared to co-operate in the distribution to doctors of the new A.P.F. through districts. The Acting President said this matter would come before the State Branch Committee of the Guild that evening. On a previous occasion members in the various Guild districts had purchased copies of the A.P.F. and given them to doctors in their districts.

Mr. Hamon pointed out that wholesale houses were now booking considerable orders from chemists. A number of chemists had already indicated their intention of presenting copies to local doctors.

A general discussion took place, during which the opinion was voiced that it was undesirable that copies

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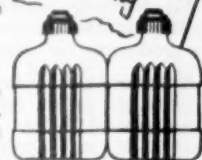
are economical and highly resistant to most acids and alkalis



We have a stock range from 1 oz. to 160 ozs.

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Toiletry squeeze bottles, vials, atomising dispensers, cream jars, etc., to customer's own design and exact colour requirements, at short notice.



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Brisbane: Chas. H. Biscoe & Son, 134 Adelaide Street.
Adelaide: R. G. Evans Ltd., 66 Rundle Street.
Tasmania: "Amsco," 19 Cameron Street, Launceston.

VICTORIA—Continued

of the A.P.F. should be given away indiscriminately. Some members of the Council felt that there should not be a free distribution by the Council irrespective of what members did individually. It was agreed that the letter to the Guild should be withdrawn, and that all copies of the A.P.F. should be sold by the Society at the price recommended by the Pharmaceutical Association, namely 15/- per copy.

Hon. Life Members.—Messrs. J. W. O. Smith, who had been a member for 45 years, and A. R. Parrett, a member for 40 years, were elected Honorary Life Members of the Society.

Full Members Elected.—New Members: Mary Lucy Newton, Marjorie Hope Paul. Transfer from Apprentice Members: Bruce McKinnon Arnall, John Denis Duffus, Dennis Milton Kulpa, Margery Jean McAlpin.

Apprentice Members Elected.—Ian Gladstone Barker, Raymond Bown Dickson.

A.P.F. Management Committee.—Mr. F. W. Johnson, Secretary of the Committee, said that members would have noticed that advance copies of the new A.P.F. had been received from the printers. The main distribution would take place at an early date. Priority had been given to the dispatch of 500 copies to Sydney in time for the Medical Congress trade exhibit opening there on August 20.

Mr. Johnson reported that the meeting would be held on August 3 to discuss plans for display of the A.P.F. at the Medical Congress in Sydney opening on August 20. Mr. B. G. Fegent, President of the N.S.W. Society; Mr. Walter C. Cotterell, President of the Pharmaceutical Association; members of the Victorian A.P.F. Management Committee; representatives of the Editorial Committee; a representative of the Council; and Mr. K. G. Attiwill, Pharmaceutical Public Relations, would be in attendance. All were agreed that the opportunity of giving a display of the new A.P.F. should not be missed, and he was confident that a satisfactory solution would be reached.

Mr. Johnson suggested that the Council should record in its Minutes appreciation of the Editorial Committee in producing the new edition.

The Acting Chairman said he would like to include a reference to Mr. Johnson's work as Chairman of the Victorian A.P.F. Management Committee. Mr. Williams said he heartily agreed.

A motion in these terms was submitted to the meeting and carried unanimously.

Dose Book.—Mr. Johnson reported that the manuscript was in the hands of the printer, and the Committee hoped to have proofs ready in time for the meeting of Interstate representatives on August 3. He thought distribution of the Dose Book would boost A.P.F. prescriptions, not only in Victoria, but in other States.

The Hon. Treasurer asked what arrangements had been made for distribution.

Mr. Hull said he understood the Finance Committee

was to look into that question. The Secretary said the meeting of the Finance Committee would be held at an early date, and would submit a report to the Council.

Interview with Director-General of Medical Services, R.A.A.M.C.—The Acting Chairman reported that he, together with Mr. H. A. Braithwaite, President of the Board and the Secretary interviewed Major-General Refshauge during the month. Lt.-Col. Gay, Senior Pharmaceutical Officer, was in attendance too. A general discussion took place, and it was obvious that the Director-General placed a high value on the services of a pharmaceutical chemist in the Army, and was interested in seeing that standing and station was maintained at a high level.

Major-General Refshauge had expressed very strongly the opinion that first aid should be made a compulsory subject in the pharmaceutical curriculum, and he (Mr. Scott) had undertaken that a recommendation would be brought before the Council.

After discussion of the report, the Council resolved that the suggestion regarding first aid be remitted to the Education Committee for a report.

Mr. Long submitted a motion that it be placed on record that the Executive be asked to maintain interest in the general problem of advancing of the status of pharmaceutical personnel in the Army. The motion was seconded by Mr. Hull and carried.

Presentation by Students.—At 11 a.m. Mr. Alastair Lloyd, Miss M. Blakeley and Mr. A. E. Davis, representing the Victorian Pharmacy Students' Association, attended the meeting for the purpose of making a presentation.

Mr. Lloyd stated that last year the students had a financial surplus, and were anxious to present something that would assist the educational work of the College, and thereby benefit all the students. After some considerable discussion they decided to buy an organic chemistry molecular model set. They had sent to Germany for this, and that accounted for the lapse of time before the making of the presentation. On behalf of his organisation, he had very much pleasure in handing over the set which, he trusted, would be found useful by the Lectorial Staff, and would be of great benefit to the students. (Applause.)

The Acting President said it gave him much pleasure in accepting the gift, and thanked the students for their co-operation and interest. This, he thought, augured well for the future. The gift was much appreciated, particularly as nowadays youth was not always prepared to devote time and money to such things. The College of Pharmacy had been singularly fortunate in the students who had gone through. Each year there was evidence of their interest in the institution in which they had been taught, and, he believed, it was to them a symbol.

Mr. Williams said it gave him pleasure to support the remarks of the Chairman. He believed firmly in visual education, and was sure that the apparatus presented would be helpful to the students in absorbing the complexities of modern organic chemistry as applied to pharmacy. It was gratifying to see the close co-operation existing between the Lectorial Staff and the students. He had noticed over a number of years how, under the leadership of the Dean of the College, the spirit of co-operation and comradeship had been developed. On behalf of the Council he added his thanks to the students for the very fine gesture they had made. The gift, he thought, was something permanent which would mark their last year at the College.

Mr. Sissons said he wished to join the other speakers

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EPHEDRINE COUGH SYRUP

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And neither will your customers once they have tried this pleasant fruit-flavoured preparation. 'Zephrol' is most effective for the suppression of irritant coughs, and for the relief of that feeling of chest constriction so often experienced in such conditions as bronchitis and asthma.

'Zephrol' is particularly acceptable to children. Recommend it, and you will be assured of repeat sales when coughs again threaten the family.

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your wonderful all purpose
cream and always have a tube
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scribe at either a 2/- or a 4/-
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Cash in on your chemist only lines
They hold chemists' business in chemists' shops

VICTORIA—Continued

in voicing their appreciation of the spirit behind the gift that had been made. Modern students realised that education today was an expensive matter, and no matter how much money any institution came by legitimately, it never had enough money to spend. Molecular models of the type presented were particularly helpful to students, and enabled a very graphic representation of those complicated molecules that were becoming so much a feature of synthetic medicinal. They were designed some 10 or 15 years ago by Professor Linnell, of the School of the Pharmaceutical Society in Bloomsbury Square. Since then there had been great progress both in the use of plastics and in the use of colour for these aids, and the German set now presented by the students was a very modern and highly ingenious one. It would be particularly helpful in giving the special configuration of these organic molecules. He was sure the staff would be delighted with it, and that the students would get a very concrete idea of some of the molecules put before them. The Dean and the student representatives then retired.

Half-Yearly Accounts.—The Hon. Treasurer, Mr. S. J. Baird, tabled the half-yearly statement of expenses and payments to June 30, 1955. These, he said, had not as yet been audited. He moved that the statement be accepted, subject to final check and audit. Seconded by Mr. Williams and carried.

A.N.Z.A.A.S. Conference.—Mrs. Crawford read a draft of a circular letter to be forwarded to members in relation to membership of A.N.Z.A.A.S., buffet dinner, motor excursion, etc. This was approved.

The meeting closed at 11.30 a.m.

THE P.D.L.

Directors' Meeting

The 374th meeting of the Directors of Pharmaceutical Defence Limited was held at 24 St. Francis street, Melbourne, on August 8, at 9.40 a.m.

Present.—Mr. B. L. Warner (Vice-Chairman) in the chair, Messrs. I. H. Barnes, W. J. Cornell, N. C. Cossar, E. A. O. Moore, C. C. Wallis and the Secretary.

Mr. E. W. Braithwaite (Chairman) and Mr. F. N. Pleasance were unable to attend because of illness.

Renewal Notices.—The Secretary reported that the renewal notices for the year 1955-56 had been printed, and were now in the hands of Melbourne Fire Office Ltd., being prepared ready for despatch at the end of the month. He also tabled a draft copy of the circular which would be sent out with the renewal notices, under the heading "Are you sure you are fully insured?" After discussion in regard to insurances generally, it was resolved to print in red at the right hand side of the circular the words "If desired, P.D.L. can arrange for all general insurances to fall due for payment on the same date."

Correspondence.—Formal correspondence was tabled, and the following were amongst the letters dealt with:

From Mrs. Ivy Gough, message of thanks for letter of sympathy in recent bereavement.

From Messrs. F. Warland Browne and Son, of Launceston, requesting details of P.D.L., and offering to distribute similar details among interested parties at the next Guild meeting in Launceston.—Information forwarded to Mr. Browne, who was thanked on behalf of the Directors for his generous offer to distribute information in regard to P.D.L.

RHINAMID

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sedative . . .
decongestive . .
bacteriostatic .

FORMULA

Sulphanilamide	0.4% W/V
p-Aminobenzoyl-di-Butyl-Amino-Propanol	0.026% W/V
Ephedrine Hydrochloride	1.0% W/V
Aqueous isotonic Excipient ad.	100%

INDICATIONS

Nasal Congestion. Coryza, Hayfever. Ordinary and Purulent Rhinitis. Rhino-pharyngeal catarrh and Pharyngitis. Maxillary and frontal Sinusitis. Migraine and Headache associated with a nasal or pharyngeal affection.

PACK

Special screwcap-dropper bottle containing 1 fl. oz.



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On taking over a country pharmacy, a member sought details of nine insurance covers. The Secretary said he had arranged for the respective companies to communicate with the member.

New Members Elected.—Messrs. Thomas D. Adamson, Cohuna; Bruce B. Brown, Ascot Vale; Alan R. Hibberd, Box Hill; Donald C. Lawrence, Melbourne; Maurice R. Lee, Thornbury; Aleck Miller, East Prahran; Frederic R. Ryall, Ashwood; Harry Waysman, Noble Park; Joseph K. Trinder and Mrs. Valerie J. Trinder, Geelong West; and Messrs. Frank W. Browne and James B. W. Browne, Launceston (Tas.).

Legal Advice.—A suburban member reported that a series of petty thefts had occurred from his pharmacy over a period of six months—amounts of £2 or £3 at a time having been taken overnight from the till. The person responsible, a 15-year-old boy, was finally apprehended at 5 a.m. on a Sunday. It was found that he had gained access to the premises by means of a window, slipping the catch with a knife and fastening the window again after leaving. The boy was the son of people living locally, but the father was disinclined to accept responsibility for his son's lapse. The member had been called as a witness at proceedings which would be taken in the Children's Court, and he wished to know his position.—The solicitor advised that the father was not legally responsible for the loss caused by his son's action; furthermore, as the proceedings would be heard in the Children's Court, no legal representation would be permitted.

A member wrote, stating that the title of the property which he occupied (shop and dwelling) was in the joint names of himself and his wife. He wished to know the advantages, if the title was transferred to his wife.—The solicitor advised that the advantage of having the property in the name of wife only was that the member would then pay her rent for the property, which had the effect of reducing his income and saving him some taxation. The disadvantage was that probate duty would be payable if the wife should die before the husband, whereas if it was in the joint names and it was used as their home, then it was not subject to probate duty.

Other matters on which legal advice was furnished were: (1) Application to Fair Rents Court for determination of a fair rent of premises which were subject to a lease, and (2) goodwill and taxation.

Legal Defence.—W.A. Case: Settlement of the costs in this case had been effected. The Branch Secretary advised that the Local Board was very grateful for the assistance that had been given. The member had written thanking the Local Board for the kindness, co-operation and attention he had received throughout his ordeal. He also inquired whether it would be possible to insure to cover all costs in connection with such cases. The Secretary was instructed to inform the W.A. Branch Secretary that although reimbursement of costs incurred in the provision of legal representation before a coroner's inquiry was not a right of a member under his insurance policy, it had been the practice of the Directors and the Local Boards for some years past to accept responsibility for any such expenditure incurred in the interest of a member called to give evidence at an inquest. In the circumstances, therefore, it would be unnecessary to insure against the contingency.

Claims.—A member reported that whilst he was away from his pharmacy his relieving manager had dispensed some tablets which apparently were of a different strength from those ordered. The patient had subsequently received medical treatment. Negotiations were in progress for settlement of a claim for wages lost during the period of treatment.

As regards two other claims in hand, there was nothing fresh to report.

Financial.—In the absence of the Hon. Treasurer, the

monthly financial statement was presented by Mr. Cosar, and accounts totalling £136/2/- were passed for payment.

The meeting closed at 12.15 p.m.

THE GUILD

**S.B.C.
Meeting**

The State Branch Committee of the Victorian Branch of the Guild met at 18/22 St. Francis street, Melbourne, on August 2 at 8 p.m.

Present.—Mr. N. F. Keith (Acting President) in the chair, Messrs. L. Hamon, J. W. D. Crowley, E. Scott, J. F. Oaten, I. R. Keelan, S. M. Adams, W. R. Iliffe, L. J. Gough, A. O. C. Blake, J. I. Richards, F. H. Bedford, H. V. Gear, F. L. Flint, W. J. Langtry, A. E. Moore, J. K. Gosstray, F. J. Gregory, J. J. Cocking, A. J. H. Riddiford, A. S. Beavis, C. I. Molloy, W. F. Glover (Secretary), and W. J. Wright (Asst.).

Present by Invitation: Mr. K. G. Attiwill.

Finance Report.—The Finance Report, as prepared by the Finance Committee, was read by Mr. Crowley, and at Mr. Blake's suggestion the Chairman agreed that the question of building up a Reserve Fund should be considered.

May and Baker.—Mr. Hamon commented on May & Baker's offer regarding an alteration in the method of distribution of the company's veterinary products, and said that as the company had agreed to all requests, the Guild campaign was concluded. It was resolved that May & Baker's offer be accepted and the company be advised accordingly, and be informed that the Guild would prefer to have the lines made available through the wholesalers.

At this stage of the meeting Mr. Glover was welcomed back with acclamation from his three months' leave.

Nomination for Office-bearers.—Mr. Richards, Returning Officer, reported on the nominations received for the various office-bearers of the State Branch. It was reported that the number of nominations received did not exceed the number of positions becoming vacant, except for the office of State President, and that the following names are those which have been nominated:—

State President: F. N. Lee and W. R. Iliffe.

Vice-President (two): N. F. Keith and L. Hamon.

State Treasurer: J. W. D. Crowley.

Voting Delegate to the Federal Council: E. Scott.

Second Delegate to the Federal Council: F. N. Lee.

Substitute Delegate to the Federal Council: N. F. Keith.

Due to the fact that Mr. Lee is overseas, Mr. Iliffe agreed that neither he nor Mr. Lee would receive a ballot paper, i.e., the position of "a pair" would apply. It was decided that Mr. Lee be notified accordingly.

It was moved by Mr. Richards, seconded by Mr. Keelan, and agreed, that the Guild Solicitor's opinion be obtained as to whether a member of the committee on leave is entitled to vote in an election held to decide who should fill a position of office, and also whether both delegates from those districts which have two representatives on the committee are entitled to a vote.

Pricing Report.—The Pricing Report was given by Mr. Iliffe, who subsequently moved its adoption, with the additional recommendations that a copy of the A.P.F. be purchased for office use, and that the retail

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This substance has been found to be effective in counteracting the respiratory depressant and narcotic action of heavy dosage of morphine. It has little effect on the analgesic action.

When used with morphine it permits the administration of larger doses at longer intervals and thus facilitates the administration of this drug in conditions where heavy dosage is usually required.

The combinations listed below should be used only for otherwise intractable pain.
Full instructions for use are obtainable in a pamphlet available from D.H.A. Houses.

AVAILABILITY D.H.A. 245 Oral: Tablets of 20 mg. in tubes of 25.

D.H.A. 245 20 mg.: Powder in vial.

D.H.A. 245 20 mg.: Powder with ampoule of double distilled pyrogen-free water.

COMBINATION PACK D.H.A. 245 10 mg. c amp. of 1/6 gr. morphine sulphate.

D.H.A. 245 10 mg. c amp. of 1/4 gr. morphine sulphate.

Distributed throughout Australia by ALL D.H.A. HOUSES

HOSPITAL PHARMACISTS

More and more progressive hospitals are changing over to ampoules for all their Dangerous Drug injections, in place of multidose vials, or hypodermic tablets.

Advantages are:—

1. Accuracy of dosage.
2. No risk of contamination or cross infection.
3. Ease of record keeping.
4. Greater protection against illicit use.
5. Majority of lines available under P.B.A.

When next ordering make sure you obtain your narcotic injections in "HERMETTE" brand ampoules from DAVID G. BULL LABORATORY PTY. LTD.

Lines include most strengths of:—

Morphine Sulphate.

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Morphine Tartrate to 2.5 grains per dose.

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Messrs. L. Gunzburg & Co.,
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148 Collins Street,
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VICTORIA—Continued

prices of Senega and Ammonia be referred back to the Pricing Committee. The motion was seconded by Mr. Gough and carried.

Correspondence.—Dealing with notice from Edinburgh Laboratories Pty. Ltd., that it desires to carry out amendments in regard to consignment stocks of Lantigen products held by the various distributors who were appointed under the contract between the company and the Guild, it was moved by Mr. Iliffe, seconded by Mr. Flint, and carried, that no alteration to the existing contract be approved unless present agents can return stocks.

Termination of Membership: Following the solicitor's advice that rule 58C provides that membership of the Guild is automatically terminated immediately a member ceases to carry on the business or profession of a chemist in open shop, it was moved by Mr. Blake, seconded by Mr. Bedford, and carried, that the resolution passed at the last meeting, that such members must submit a formal resignation before being deleted from the list of membership, be rescinded.

As a result of a suggestion from Mr. W. A. Day, of Bendigo, that representation should be made to Parke Davis and Frederick Stearns regarding the cost of cases, it was decided that an approach be made to those companies with a view to obtaining consent that cases be not charged for on orders exceeding £25.

Letter from the Pharmaceutical Society, forwarding copy of the new form of application for appointment as Representative for the Hospital Benefits Association, is to be replied to, advising that the new form is acceptable, adding the following suggestions for further co-operation:—

1. Receipt books should have receipts printed in triplicate, as the present receipts make double work.
2. When a Representative sends an H.B.A. member to head office, that Representative should be credited with the money paid.
3. The Guild be consulted regarding any books, stationery or literature with which the Guild is connected.

Arising out of the subject matter of a letter from Federal Office, which requests Federal Office representation at the proposed meeting between Guild members and Dr. Metcalfe and Mr. Jewkes at Bendigo, it was suggested that invitations be sent to all members in No. 13 District, plus those in Echuca, Kerang and Swan Hill.

Federal Report.—The Federal Report was presented by Mr. Scott, who enlarged on the salient points.

Financial.—The Treasurer's report was given by Mr. Crowley, and accounts amounting to £1049/0/7 were passed for payment.

New Members Elected.—Messrs. G. C. H. LePlastrier, Horsham; A. T. Galvin, Melbourne; B. D. Brown, Ascot Vale; T. D. Adamson, Cohuna; A. Miller, East Prahran; J. A. Ware, Seymour; Mrs. M. L. Newton, Highett; Mr. and Mrs. J. K. and V. J. Trinder, Geelong West; Mr. and Mrs. G. R. and K. P. Warnecke, Brighton.

Re-entered as Member.—V. R. Weymouth, Sale.

Lodge Committee's Report.—The report of the Lodge Committee was given by Mr. Gosstray, who stated that the Committee had met on July 20, and discussed further the letter from Werribee, and recommended that as the figures asked for refer particularly to the Werribee district chemists in Werribee be asked to supply the figures and forward them to the Lodge Committee. It was also decided to obtain information regarding the names of the districts in which the Pool System is

operating. It was reported that five new dispensaries with partial approval have opened since 1945.

District Reports:

District No. 3.—Dispensing of Ethicals: A remit that a lower rate be inserted in the proposed new dispensing rates to cover prescriptions containing identifiable ethicals was discussed, and it was decided that the matter be referred to the Pricing Committee.

District No. 5.—

Trading Hours.—The district declared its policy regarding trading hours, and is against any extension of the present hours.

Dispensing Without Prescription Form.—On the motion of Mr. Oaten, seconded by Mr. Scott, it was decided to refer to the Medico Pharmaceutical Liaison Committee the practice of some doctors in directing patients to obtain some proprietary article, either by word of mouth or by the writing of the name of the article on a scrap of paper accompanied by the remark: "If I gave you a script for this it would probably cost you more," or to obtain some A.P.F. or similar formula preparation on the same basis, it being considered that this practice is unethical, and reacts against the doctor also, as he will lose patients if it is known what to order from the chemist without consultation.

District No. 6.—Price Cutting: It was decided to defer till next meeting the suggestion that direct action be taken to ensure that P.A.T.A. prices are maintained.

District No. 19.—

Pharmacy Education.—It was moved by Mr. Gregory and seconded by Mr. Blake and carried that district representatives be asked to report at the next meeting their district views on the question of requesting the Tripartite Committee to consider apprenticeship position and Pharmacy education generally.

Dispensing Fee for Ointments.—It was decided to refer to the Pricing Committee for consideration the suggestion that in the new dispensing fee for ointments a variation of the compounding fee be made to allow for an extra ingredient and "dirt money" for dyes and straight tar.

Health Department Claims.—It was decided to refer to Federal Office the suggestion that the Health Department issue a suitable standard addressed envelope with attached card to be filled in by the chemist, and posted back to him as an acknowledgment of the safe arrival at its destination of N.H.S. claims.

Repat. After Hours Fee.—The question of charging the patient an after hours fee when the prescription is not marked urgent, and it is impracticable for the patient to present it during regular hours, is to be referred to the Pricing Committee.

District No. 4.—

Prolac.—It was decided to approach Nicholas Pty. Ltd. to voice an objection to Prolac being included in a list which shows 50% on other lines but only 33 1/3% plus a dispensing fee on Prolac.

Grocery Trade Price List.—It was agreed that the Pricing Committee obtain a grocery trade price list for reference when computing prices of lines stocked by grocers.

Drugs and Chemicals Price List.—It was agreed that the Pricing Committee give consideration to replacing in this price list the 2 oz. retail prices with the prices for 8 oz.

P.M.S. Scripts for Eye Drops.—It was decided to request Federal Office to raise the matter of the price of eye drops for P.M.S., as in dispensing it is necessary to make a larger quantity than is paid for.

The meeting closed at midnight.

QUEENSLAND

PERSONAL and GENERAL

State News

Members desiring publication of personal items of interest are invited to write or telephone details to the Journal Correspondent in Queensland, Miss D. Brighouse, phone B 8407.

Mr. Terrence Knight is opening a pharmacy at Main street, Kangaroo Point.

Mr. M. W. Roberts has opened a pharmacy at 20 High street, Toowong.

Miss Barbara Woodgate is establishing a pharmacy at 255A Annerley road, Dutton Park.

Mr. F. F. Mills, of Clermont, visited Brisbane during the month for the annual Local Authorities Conference.

Messrs. L. H. Benjamin, B. M. Benjamin, Y. J. Lister and B. Lister have established the Albion Pharmacy at 4 Albion road, Albion.

Mr. Douglas Moreton, of Toowoomba, is opening a pharmacy in that city at the corner of Margaret and Mary streets.

Congratulations to Mr. Bruce Beatts, who has been appointed Manager of Drysdale's Ltd. in succession to Mr. M. W. Roberts, who resigned to commence business on his own account.

ENGAGEMENTS

Congratulations and good wishes are extended to the following pharmacists who recently announced their engagement:—

Mr. John Gardner, of Ingham, whose fiancée is Miss Patricia Gent, of Highgate Hill.

Mr. Dudley Stringer, who announced his engagement to Miss Sylvia Calvert, of Hemmant.

OBITUARY

The death occurred in Brisbane on July 22 of Mr. C. B. Schneider, of Mitchell. Mr. Schneider had been ill for some months, but his death came as a shock to his relatives and friends. For many years Mr. Schneider managed the pharmacy at Mitchell on behalf of Mr. N. L. Topping, of Warwick. In 1952 he became the proprietor of the pharmacy. Sincere sympathy is extended to Mrs. Schneider and her three children in their bereavement.

Mr. W. B. Rawlinson, formerly of Redcliffe, died on July 24, in his 90th year. Mr. Rawlinson, who was the only chemist in business at Redcliffe for many years, retired from business over 20 years ago, and more recently had been living at the War Veterans' Home at Caboolture. The late Mr. Rawlinson was a member of the African War Veterans' Association.

Mr. T. J. Rutter, a stepbrother of the late Mr. R. C. Rutter, died suddenly in Cunnamulla during the month. The late Mr. Rutter was in business at Fiveways, Woolloongabba, for a number of years, but since selling that pharmacy he had managed pharmacies, and more recently had been in the Charleville-Cunnamulla area. At the time of his death he was managing the pharmacy of H. E. Barnes & Co., Cunnamulla.

To the relatives of these deceased pharmacists sincere condolence is extended.

FINAL EXAMINATION RESULTS

At the final examination conducted by the Pharmacy Board in June, 26 candidates were successful, one post was granted, and 27 failed.

Congratulations and good wishes for the future are extended to the following who were successful:—

Misses B. C. Begg, W. E. Bell, W. E. Brand, A. V. Burrows, H. T. Dwyer, J. M. Garbutt, V. E. King, A. M. Millican, M. T. Murphy, A. M. Ross, M. V. T. Skipper.

Messrs. I. P. Brusasco, N. Collyer, R. Davis, H. R. Goodson, T. G. Harries, T. W. Liesegang, R. W. Lun, B. C. Major, C. J. Massie, R. H. D. Mitchell, J. Moran, J. H. Searle, J. R. Walker, W. P. Webb, A. L. Weeks. A post was granted to Mr. P. G. Cominos.

QUEENSLAND CHEMISTS' GOLF CLUB

Once again we have received details from Cliff Noble, Secretary, Queensland Chemists' Golf Club, regarding their latest outing held on July 24 at the Oxley Golf Links. Members and visitors had the pleasure of visiting this club, and all were delighted to inspect the new clubhouse. Congratulations are extended to the Oxley Club for the progress they have made and for the courtesy extended to the Chemists' Golf Club.

A field of 55, including 16 associates, faced the starter. Conditions for golf were very good, and some excellent cards were returned.

Winners of the respective competitions were as follows:—

Four Ball Best Ball Stableford: Mr. and Mrs. E. Cairns.

A Grade Individual Stableford: Mr. E. Nicholls.

B Grade Individual Stableford: Mr. B. Chester-Master.

Associates' Competition: Miss Pat Wilson.

Nearest the Pin Competition: Mr. J. Woods.

The popular President of the Club, Mr. A. G. Asprey, handed prizes to the winners, and advised them that, although the handicapper was not present, he would take good care to see that those winning trophies were severely dealt with so far as handicaps were concerned.

The next outing is set down for Nudgee early in September.

CHEMISTS' BOWLING NOTES

An enjoyable game was played against the Balmoral Club on July 17, when the chemists gained a small margin victory. The scores were:—

	Chemists	Balmoral
Dr. Dowling, Macpherson, Kunze,		
Fitzsimmons	15	29
Dr. Jobbins, Dr. Moreton, Ward, Bell	17	31
Allison, Dr. Oakley, Archibald,		
Waldron	26	22
Barnett, Riddell, Chapman, Coffey	33	16
Dr. Burke-Gaffney, Lewis, White-		
head, Young	35	25
	126	123

Trophy spoons for the afternoon's play were won by Waldron's rink.

Arrangements are proceeding for the visit to Sydney from October 3 to 7, and an invitation is extended to any chemist-bowler to participate. At the present time four rinks will be playing against their colleagues in the "big smoke." Country chemists are especially invited to join with their city pharmacist-bowlers and make the visit to Sydney. Anyone who is interested should contact the Secretary, Mr. Ron Ward, Moses Ward & Son, 300 Queen street, Brisbane.



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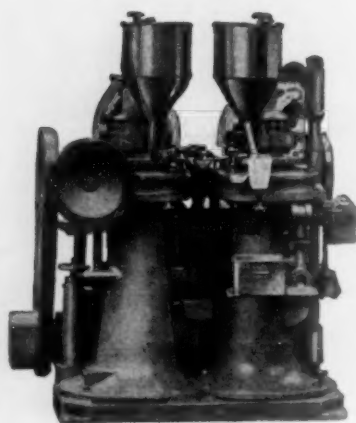
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QUEENSLAND—Continued

PHARMACEUTICAL SOCIETY

Council Meeting

The Council of the Pharmaceutical Society of Queensland met at Drysdale Chambers, Brisbane, on July 14, at 8 p.m.

Attendance.—Mr. R. V. S. Martin (President), Miss Chalmers, Messrs. R. S. F. Greig, J. E. McCaskie, E. W. Vance, H. G. E. Sneyd, G. R. Wells, L. A. Stevens, J. M. McKenzie, and the Secretary.

Correspondence.—To Mr. A. E. Conolly, Secretary, Federal Council of Pharmaceutical Societies, advising this Council reaffirms its agreement with the objects as set out in a letter to Mr. Attiwill for the proposed Royal Charter. Urging that the matter be proceeded with before the next meeting of the Pharmaceutical Association.

To Mr. Mason, Pharmaceutical Representative, I.C.I., expressing the Council's appreciation of the handsomely bound reproduction of "Culpeper's Herbal" for the Society Library.

To Professor Herbert, local Secretary A.N.Z.A.A.S., seeking enrolment forms for the A.N.Z.A.A.S. meeting.

To Mr. Dowd and Mr. A. Nichols, seeking the inclusion of a par. in their weekly newsletters concerning Section "O."

From Minister for Health and Home Affairs, acknowledging scheme for Pharmaceutical Education in Queensland.

From Pharmaceutical Association: (1) Advising that the A.P.F. 1955 will be off the press before the end of July. (2) Forwarding for the information of the Council copy of a letter from the Victorian Society with regard to publication of a B.P. Dose Book with therapeutic notes.—Mr. Greig said there were doses in the B.P. and A.P.F., and he could see little purpose in such a book. Other members agreed with the views expressed by Mr. Greig, and it was resolved that the correspondence be received.

Journal.—Consideration of communication from the Journal Board with regard to an increase in the rate per issue of the Journal. Mr. Greig said he would like the Council again to give consideration to this communication, as it might be necessary to increase the annual subscription. If so, due notice would have to be included in the notice of the Annual Meeting.

With regard to the annual subscription, Mr. Greig moved that at this stage the annual subscription remain as at present, the position to be reviewed again in March, 1956, in the light of any increased costs, so that consideration can be given in plenty of time for the annual meeting of 1956. Seconded by Mr. Stevens. Carried.

New Members Elected (Full Members).—Mr. C. Carmichael, Home Hill; Mr. T. Knight, West End; Miss P. M. Farrell, Burleigh Heads; Mr. P. Dimitrios, New Farm; Mr. J. White, Bundaberg; Mr. W. A. Williams, The Gap; Miss Ailsa Lawrence, Warwick; Mr. A. F. Sherlock, Rockhampton; Miss L. Jorgensen, Aspley; Mr. E. R. Burns, Brisbane.

New Members.—Mr. Greig moved that with the idea of assisting to build up the Society membership, immediately notification is received through the gazette of registration of new pharmacists in this State, a letter together with an application form for membership be

forwarded to each person. Seconded by Mr. Sneyd. Carried.

Reports.—Mr. Wells reported on the June "A.J.P." Mr. Stevens on "The Pharmaceutical Journal" (Great Britain) and Mr. McKenzie on "Pharmacy International."

Pharmacy Board.—Mr. Martin reported on matters engaging the attention of the Board.

Ethical and Professional Bulletin.—A proof of this month's Bulletin was submitted to the Council. A few suggestions were made, and the Secretary was authorised to notify Mr. Mellick to proceed with printing.

Report by Sub-Committee on Dispensing Tolerances.—A copy of the report had been made available to each member of the Council. The President said he would recommend that each member study the recommendations, and that further consideration be given to the Sub-Committee's report at next meeting.—Mr. Greig moved that the report be received. Seconded by Mr. Sneyd. Carried.

Social Sub-Committee.—Mr. McCaskie said the film evening arranged for June 28 had been very pleasant, but unfortunately the attendance was poor and disappointing.

Mr. McCaskie said the Sub-Committee had met prior to the meeting, and they were considering arranging another picnic for Sunday, September 11 or 18. It was suggested that the picnic spot on this occasion be Fernvale, and that an invitation be extended to Ipswich, Toowoomba and any other chemists in the locality to join in.

It was also suggested that a Xmas function be held some time in late November. Discussion took place as to the type of function to arrange, and it was agreed that the Social Sub-Committee should further discuss this question.

As far as the picnic is concerned, it was agreed that the picnic arrangements should be left in the hands of Mr. Vance and Mr. McCaskie.

Annual Meeting.—It was resolved that the annual meeting be held on Tuesday, September 20.

Nominations for Members of Council.—The Secretary reported that nominations had been received in favour of Messrs. R. V. S. Martin, L. A. Stevens and Ian Young. Mr. Vance had not re-nominated.

Mr. Vance said he found the travelling to and from Ipswich rather tiring, and he had been on the Council for some years now.

Mr. Greig said members realised Mr. Vance had some distance to travel, and they did appreciate his interest in Society matters over the years. They trusted that he would re-consider his decision and continue his association with the Council.

The meeting closed at 10.30 p.m.

THE GUILD

S.B.C. Meeting

The State Branch Committee of the Queensland Branch of the Guild met at Drysdale Chambers, Wickham street, Brisbane, on August 4, at 8 p.m.

Attendance.—Messrs. W. A. Lenehan (President), C. A.

Nichol, W. E. Martin, F. H. Phillips, A. B. Chater, L. Hall, J. J. Delahunty, G. Nolan, C. W. Noble and the State Secretary.

Consideration of Agenda for Pricing Officers' Conference.—Discussion and consideration was given to items listed for the forthcoming Pricing Officers' conference, and the delegate was instructed accordingly.

Mr. Chater said from time to time he received requests for a veterinary price list, and he thought that something along these lines should be undertaken in the near future. Mr. Chater moved that the Federal Secretary be written to, and the following be submitted as a late remit: "That consideration of the production of a veterinary price list be produced by Federal Office." Seconded by Mr. Martin. Carried.

Mr. Chater said he would like members' attention drawn to the fact that the dispensed prices of Ferbelan are included under Liquid Ethicals in the Guild Tablet Book, and requesting that members adhere to those prices.—The Secretary was requested to advise members accordingly.

Report from Trade and Commerce Committee.—Consideration was given to the agenda for the forthcoming Trade and Commerce Conference, and the delegates were advised of the committee's views.

Visit of the Federal Merchandising Manager.—Mr. Lenehan reported that the Secretary had prepared the itinerary for Mr. Ross to visit Maryborough, Rockhampton, Mackay, Townsville, Cairns and Toowoomba. Mr. Ross would commence his visit by being guest speaker at the annual meeting on August 30. Mr. Ross had approved of the itinerary, and the Secretary would now be writing to the key men making the necessary arrangements.

Mr. Nichol said he felt that the President, and possibly the Chairman of the Trade and Commerce Committee, Mr. Delahunty, should accompany Mr. Ross, especially as the visit would be following the conference in Melbourne. Mr. Nichol said it would be no use taking a number of speakers. Two speakers or three at the outside were ample.

Mr. Martin said he felt that too many speakers were not required. Opportunity should be given to the local members to ask questions on various subjects.

Mr. Nichol moved that the President and Mr. Delahunty as Chairman of the Trade and Commerce Committee accompany Mr. Ross on his visit to the north.

Over-the-Counter List.—The President said Mr. Huxham had this list in hand. Members said it was urgently required, and they would like it printed as soon as possible; also the sundry list which Mr. Bell was preparing—this was also urgently required.

New Members Elected.—Messrs. T. Knight, Kangaroo Point; D. Moreton, Toowoomba; and M. W. Roberts, Toowoong.

Correspondence.—To Mrs. Schneider, expressing sincere sympathy following the death of Mr. Schneider.

To Federal Secretary, forwarding the Fitzpatrick Calculator, with the recommendation that it be brought before the Pricing Officers' conference, in the hope that it will be adopted for the whole of Australia and be known as the Fitzpatrick Calculator.—Reply stating that he had heard of the calculator from Mr. Jewkes, and would be pleased to bring it before the Pricing Officers' conference.

To Mr. H. P. Fitzpatrick, offering the congratulations of the Committee on the compilation of the calculator, and stating what steps had been taken, with a view to its being adopted for the whole of the Commonwealth.

To Federal Merchandising Manager: (1) Recommending that inquiries be made from all States concerning "Gilseal" Dyes service available from the manufacturers, and the whole question be then discussed at the Trade and Commerce Conference. (2) Inquiring if any progress has been made with a new design and colour scheme for "Gilseal" series, as this State is anxious to redesign its existing packs.—Reply forwarding sample of colour scheme and design which has been decided on for Victoria.

To N.S.W. Branch Secretary, inquiring if the amendment sheet No. 1, with the alterations up to date, could be issued with the new list each time it is issued, as it is felt that it would rectify any anomalies which seem to creep in under the present system.—Reply stating the suggestion is a good one, and in future he will send alteration sheet No. 1 with the price list on all occasions.

To convey the real idea of what was intended, it was agreed that Mr. Chater should have a word with the N.S.W. representative at the Pricing Officers' conference.

To Mr. J. B. Storrar, on behalf of the President and members of the Committee, conveying congratulations on his promotion to the Sydney branch of his company, and conveying best wishes for health, happiness and success in his new sphere.—Reply expressing appreciation for many courtesies received during the years, and stating that if he can be of any assistance in his new position he will be happy to do so.

From Federal Secretary: (1) Stating it is an impossible task to make a block booking in any way for the Olympic Games, and suggesting that any inquirers should be directed to communicate direct with the Olympic Civic Committee. (2) Drawing attention to the fact that remits for the annual Federal Council meeting should be to hand by August 17.

The Secretary tabled proposed remits which had been mentioned since last Federal Council meeting. After discussion, it was agreed that these remits be forwarded.

The Federal President's monthly letter was tabled.

From Brisbane Chamber of Commerce, seeking name of representative for the ensuing year. Resolved that Mr. Delahunty be reappointed Guild representative to the Brisbane Chamber of Commerce.

Federal Delegate's Report.—Mr. Martin tabled correspondence which he had received during the month.

Pharmacy Board.—Mr. Nichol reported on matters which had recently been engaging the attention of this body.

"Dexsal" Month.—Mr. Delahunty reported that he had been approached by Mr. Nichols, of D.H.A. (Qld.) Pty. Ltd., for another "Dexsal" month in February next. Mr. Martin proposed, Mr. Nichol seconded, that this committee approve of the suggestion, and an endeavour be made to have the "Dexsal" month made a special Federal drive. Carried.

It was agreed that one or two members of the committee should accompany Mr. Delahunty in his approach to D.H.A.

Nominations for Members of the Committee.—Mr. Lenehan reported that five nominations had been received to fill seven vacancies on the committee. Messrs. A. W. Eberhardt and A. N. C. Munro did not seek re-nomination.

The meeting closed at 11.20 p.m.



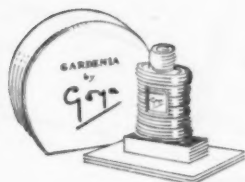
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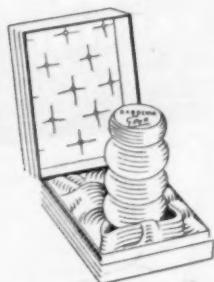
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SOUTH AUSTRALIA

PERSONAL and GENERAL

State News

Members desiring publication of personal items of interest are invited to write or telephone details to the Journal Correspondent in S.A., Mr. E. F. Lipsham.

Mr. J. M. White has accepted a long term engagement with Mr. D. Finlayson of Grote street, Adelaide.

Mrs. N. Gerard assisted Mr. P. Roberts, of Parkholme during July.

Mr. R. Brice relieved Mr. H. Collyer, of Brighton, during the early part of August.

Mr. G. Harnett is manager of the new pharmacy opened at Golflands by Carrig-Chemists Ltd.

Mr. E. Hession has been spending a few weeks on holidays in Queensland.

Mr. E. N. Scott, of Keswick, will return from his trip to South Africa about mid-October.

Mr. M. Palk has been relieving Mr. D. Mosel of Torrensville.

Mr. R. Chesney has transferred to the register of The Pharmacy Board of Northern Ireland.

Mr. J. Rolfe at Findon has moved into new premises on the Findon road.

Mr. J. Michael is to open a pharmacy on The Broadway in Glenelg South.

Mr. P. Ball has purchased the pharmacy at Edwardstown previously conducted by Messrs. Currie & Ramsey.

Mrs. C. Wilkens is now in charge of the pharmacy in King William street south which was previously conducted by the late Mr. Brian Webber.

Mr. D. Manhire acted as relieving manager for Mr. W. Humble of F.S.M.A., Port Pirie, in the first two weeks of August.

Mr. David King has been appointed as representative on the University's Students' Representative Council on behalf of pharmacy students.

Mr. J. Pain, of Birks-Chemists Ltd., has booked a passage to England and is to leave on February 10 next. He will return by air via U.S.A.

Mr. D. Farley has been relieving Mr. J. Flood of White's Pharmacy, Hindley street, Adelaide, and also Mr. A. C. Holloway, of Diagonal road, East Glenelg.

Mr. E. C. Sauer has engaged Mr. G. Valente and Mrs. M. Sweet to act as managers for his branch pharmacies at Morphettville and Paringa Park.

Mr. J. Davies, after a brief spell under engagement with Mr. P. Roberts of Parkholme, Adelaide, has transferred to New South Wales under reciprocal agreement.

Mr. J. Cracknell has resigned his managership with F.S.M.A., Torrensville, to manage the pharmacy previously conducted by the late Mr. J. T. Gray, of Orroroo.

Mr. R. Branson, of Corrigan, W.A., has taken out reciprocity papers with the Pharmaceutical Society of Great Britain.

During August **Mr. B. Kildea** assisted at Pier Pharmacy, Glenelg, during the absence of the proprietor, Mr. Nunn.

The President of the University of Adelaide's Pharmaceutical Students' Association, **Mr. J. Jackson**, visited Melbourne in July for the purpose of attending their Pharmacy Ball.

Mr. R. Parker has resigned his appointment on the staff of the Pharmacy Department of the Royal Adelaide Hospital and joined up with the Friendly Societies' Medical Association.

Mr. G. Mathieson spent a week in June with Mr. A. Evans, of Magill. He has also spent a fortnight at the Kilkenny branch of F.S.M.A. during the absence of Mr. R. Parker.

Mr. T. Rowe, of Broken Hill, visited Adelaide on his annual vacation and reports excellent business and good health of his wife (Thelma Hall) and children in spite of the magnificent collection of rocks and boulders in the back yard of their home.

Arsenic Missing.—Fifty-six lb. of arsenic in a parcel was taken from a laneway off Clarence place, Adelaide, on August 4. David Johnson Gordon, chemist, of King William street, City, left the parcel of arsenic and 28 lb. of caustic soda on the ground while he walked to the corner to see if a friend were coming. When he returned in four minutes the parcel was gone. Police believe the parcel was too heavy for a child to have lifted.

Among the highlights of the journey to England of **Mr. and Mrs. Harold Martin**, of Rosewater, was a stop at Port Sudan, where their ship, the S.S. "Titanic," loaded some thousand tons of Gum Arabic. At this port also, while seeing the sights by taxi, their driver refused to stop to allow Mr. Martin to take photographs owing to the danger of molestation by the natives. The camera he took with him was a Kodak Retina IIIc, for which Kodaks in London offered him about twice its original cost. He was told that good cameras were still very difficult to obtain over there. Since their arrival in England they have motored extensively throughout Great Britain, Scotland and on the Continent. On the Continent they found great difficulty in managing the various rates of currency and in relative values of goods, e.g., a serve of 12 average-size strawberries cost 17/11. They will be leaving England towards the end of August to return home via the United States of America and Canada, where they hope to visit some of the plants of the big manufacturing chemists.

NEW COUNCIL MEMBER

Our issue of July 30 (p. 844) carried notification of the appointment of **Mr. A. G. Evans** as a member of the Council of the Pharmaceutical Society of South Australia. We are now able to publish an illustration taken from a photograph of Mr. Evans, an outline of whose career was published last month.



Mr. A. G. Evans

VISITORS TO MELBOURNE

The following South Australians visited Melbourne in the third week of August to attend meetings of Section "O," Pharmaceutical Science, of the Australian and New Zealand Association for the Advancement of Science:—

Mr. A. A. Russell, of Hyde Park, President of The Pharmaceutical Society of S.A.

Mr. D. J. Penhall, of Royal Park, Vice-President of The Pharmaceutical Society of S.A.

Mr. S. A. Downie, Chief Pharmacist of the Adelaide Children's Hospital.

Mr. R. A. Anderson, of the staff of the Pharmacy Department of the Royal Adelaide Hospital.

Mr. A. E. Bowey, Pharmacy Department of the University of Adelaide.

SOUTH AUSTRALIA—Continued

Mr. K. D. Johnson, assistant manager of the Torrens side works of F. H. Faulding & Co. Ltd.
Mr. B. Stock (J. Pickering, Croydon Park).
Mr. B. Tregilgas (R. Gwynne, Lockleys).
Mr. R. Maloney (Pharmacy Dept., University).

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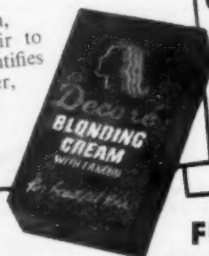
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SOUTH AUSTRALIA—Continued

the important discovery of penicillin. Mr. Phillips stressed the fact that of the vast number which had been found very few are suitable for use in man, but that several were still under investigation as showing promise of results. The speaker then developed the aspect of antibiotics which is of particular interest to pharmacists, namely that of combining together in a single medicament of more than one antibiotic as well as the dispensing of this group of agents in association with other drugs of different origin.

[The text of Mr. Phillips' lecture is published on page 282 of this issue.—Ed.]

He was followed by Mr. F. Collins, M.Sc., of the University Department of Bacteriology. Mr. Collins spoke on "Sera and Vaccines, Particularly the Salk Vaccine." He described the manufacture of the Salk vaccine in considerable detail and stated the extent of the present knowledge of its effectiveness. Members were also interested to learn of hopeful progress being made by Australian investigators following a different approach to the question of poliomyelitis immunisation.

The third speaker was Mr. R. A. Anderson, B.Sc., A.U.A., a pharmacist from the Royal Adelaide Hospital and a member of the sub-committee which arranged these talks. He spoke on "Barbiturates," under the general headings of therapeutic groupings, chemistry and dispensing. Mr. Anderson has carried out investigations into the solubility of phenobarbitone under different conditions and was able to give members useful information.

A brief period was allowed for questions to the first two speakers at the end of their talks, but Mr. Anderson finished with the arrival of supper (2/- per head, and a good one, too), so questions to him had to be made personally over coffee, etc.

The next evening in the series is scheduled for the same hall on Thursday, September 8, when Professor T. D. Campbell, Professor of Dental Science, will be the speaker.

COMPLIMENTARY DINNER TO PROFESSOR A. K. MACBETH

The Council of the Pharmaceutical Society of South Australia decided to honour Professor Macbeth, formerly Angas Professor of Chemistry at the University of Adelaide, on his retirement by tendering a complimentary dinner at the Oriental Hotel.

The function was held on the evening of August 11—a fitting choice of date, as it was also the Professor's birthday anniversary. At the function a portrait in oils, to hang in the Pharmacy Lecture Room at the University, was unveiled, and a presentation to commemorate the occasion was made.

This highly successful function marked another milestone in the progress of pharmaceutical education in South Australia.

The comparatively small room, the cosy arrangement of the tables, the quality of the vocalist Mr. J. Ewens and community singing provided an excellent start.

The toast master, Mr. A. N. Gould, kept proceedings moving along at a good pace, himself filling in at times with anecdotes of the Chemistry Department when gaps would have been troublesome with a master of ceremonies of lesser calibre.

Guests began to collect at 6.30 p.m. to partake of cocktails and savouries in the anteroom before the President, Mr. A. A. Russell, led the guest of honour and members in to dinner at 7 p.m.

The management of the Oriental Hotel provided an excellent meal which the staff served with speed so that it reached the tables hot and thereby most acceptable.

The Loyal Toast was taken early, the main business of the gathering being deferred until the tables had been cleared and coffee served.

Professor A. Killen Macbeth

The toast master then called upon the President to propose the toast of Professor Macbeth. During his remarks Mr. Russell said that the occasion was unique in the history of the Pharmaceutical Society, and one with which he, as their President, was proud to be associated. Tonight they paid tribute to Professor Macbeth's work for Pharmacy: there was no doubt that Pharmacy had greatly benefited from its association with the Professor.

At the outset Mr. Russell said that he wished to convey on behalf of all of the members the best of wishes for a happy retirement after many long years of hard work.

It was also fitting that he should recall that away back in 1928 Dr. Macbeth arrived in Adelaide from



Prof. A. K. Macbeth (left) in conversation with the President, Mr. A. A. Russell, and Mr. K. S. Porter.

the Durham University, where he had been a Reader in Chemistry, to occupy the position of Angas Professor of Chemistry at the University of Adelaide.

Little did members of this Society of that day realise the advantages to Pharmacy which were to follow this appointment. During his 21 years as Chairman of the Board of Studies in Pharmacy, Professor Macbeth had made many changes in the courses provided for their students.

His first project was to organise courses in Chemistry, Volumetric Analysis and Botany specifically designed to be suitable for students in Pharmacy. In 1930 he arranged a course in Modern Materia Medica, and the following year Practical Dispensing, this last subject to be handled by the newly-appointed Lecturer, Mr. E. F. Lipsham.

Then in 1932 came the Professor's work in designing the plans for the new Johnson Chemistry Laboratories and the allocation to Pharmacy of a small laboratory capable of holding 20 students, so that the course in Dispensing could be extended.

These improvements to the curriculum paved the way for the introduction by the University of the Diploma in Pharmacy in 1933. As the years slipped past Pharmacy achieved recognition as a separate Department after its transfer to the Darling Building in 1940 because the original laboratory had been outgrown.

In 1953 the next big step forward was taken with the major reorganisation of all courses so that students now attend at the University on specified full days in each week according to their year of studies.

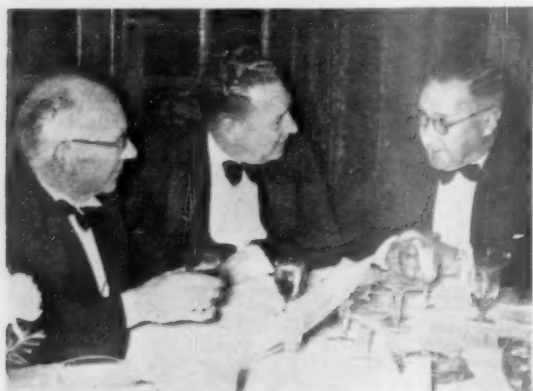
It was therefore obvious that as a supporter of the concurrent system of training Professor Macbeth had developed a course making use of the best features of organised lectures and personal tutorship.

The Professor had undoubtedly proved his ability to foresee changing conditions, to meet them adequately

SOUTH AUSTRALIA—Continued

with changes in the course, so that on qualifying their members were properly equipped to serve the public.

The interest which he had taken in Pharmaceutical Education had extended beyond the State; he had willingly attended interstate conferences to add to his knowledge and further the knowledge of those he met.



Left to right: Messrs. C. A. M. Reid, M. J. Pinchback and L. F. Wilson.

In the field of Organic Chemistry the Professor's work during the war years in setting up processes to synthesise drugs which were not available in Australia was of value to them as pharmacists, and greatly benefited the Australian Armed Forces and the public generally.

In proposing this toast to their guest he was privileged to be associated with the President of the Pharmacy Board, and he would be pleased if the Master of Ceremonies would call on him to support his remarks. (Applause.)

The toast master then called upon Mr. K. S. Porter to support the toast.

Mr. Porter said it was a great pleasure to him to have the privilege of supporting this toast to Professor A. Killen Macbeth.

His many years of association with the Professor in various capacities of Official Pharmacy had given him the opportunity to realise and have a great admiration for the many ways in which he had contributed to their profession.

When he was first informed that he was to support this toast proposed by the President, and thought of his powers of oratory, he was for a moment concerned that little would be left for him to say; but a moment's reflection was very reassuring, for he quickly realised that Professor Macbeth's impact on Pharmacy in South Australia was so widespread and of such magnitude that even after Mr. Russell's eloquence there would still be ample scope for him.

His first associations went back to student days, when he was privileged to be amongst the first groups to complete the then new Diploma Course, and as such they were fortunate in having Professor Macbeth for their lectures—especially did he feel this was so for Organic Chemistry.

He could well remember their difficulty in coping with his accent, which they ultimately mastered, and looked forward to (even if they often imitated him behind his back!). Then came recollections of their feeling of satisfaction of his interest in their profession, in that he provided for their small group specifically

prepared lectures. Each session was preceded by questions of which he seemed to remember having had the "lion's share." They were very proud of their textbook on Organic Chemistry which he specifically wrote for the benefit of Pharmacy and other students.

Another facet of his memories included the Professor's ever-ready willingness to attend their student dinners, where he first learnt of his efforts at making horse balls in the early years of his career, and also often wondered whether taking too much from the jug in the centre of the table would be detrimental to their examination results. He wondered whether students thought about such things today.

As the years went by, and he began to take an active part in Official Pharmacy, a greater realisation of the status which Professor Macbeth had so greatly helped to create for their profession came to him. In addition, he also became aware of the many other facets of Pharmacy which bore some mark of his guiding hand.

Many of them were able to see what they wanted, but found difficulty in planning the right steps to achieve their goals. The Professor seemed to possess that uncanny intuition of being able to place his "stepping stones" in the right places without having to pull them up and replace them; always the path seemed to go in the right direction and reach its goal. Mr. Russell had spoken of how right had been the Professor's planning for them, in providing a basis for a course which had met the ever-changing conditions of practice.

In the Professor's capacity of Chairman of the Board of Examiners in Pharmaceutical Studies, Mr. Porter said he had always been impressed by his keen appreciation of the difficulties of students, his desire to give them every opportunity provided they were willing to work, and when the time came for determining results, his alertness in seeing that all students were treated with equal fairness.

Another important facet in the pharmaceutical structure was legislation involving Poisons and Dangerous Drugs. Once again they saw the guiding hand of Professor Macbeth. Few of them realised the importance and significance of having workable Regulations in this field of their profession, and the major effect this had had on their status in the eyes of allied professions and the public.

Professor Macbeth's work on the Advisory Committee to the Government on Foods and Drugs Legislation had been appreciated, and was still being appreciated in many quarters.

During the passage of a Dangerous Drug Act Amendment Bill through the House in June of this year, an Honourable Member in addressing the House paid a compliment to those people who were the advisers to the Government when the Dangerous Drug Act was passed in 1934. This Act was now being recommended by the Public Health Committee of the National Health and Medical Research Council as a model for new uniform Commonwealth-wide legislation. Prominent among those advisers appeared the name of Professor Macbeth.

He would now like to quote from Hansard some remarks made to the House by a prominent Honourable Member:

"This State is very fortunate to have such men skilled in their respective professions, who not only advise the Government, but also give their professional knowledge for the purpose of bringing down legislation to protect the interest of citizens."

"Such a man is Professor Macbeth," said Mr. Porter.

In conclusion, he would like to extend his personal thanks to the Professor for the help that he had been to him, firstly as a student, secondly for his many

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The Book is now available in Australia, and is being sold through leading bookstalls and chemists. The book retails at 14/6, with a 50% profit margin. Copies of the book can be made available to you through World Agencies Pty. Ltd., Sydney.

SOUTH AUSTRALIA—Continued

contributions to the profession which had helped to make Pharmacy in South Australia a calling in which he was proud to be associated, and finally for his co-operation with him in fields of Official Pharmacy, especially where they had been in conjunction with the University of Adelaide. (Applause.)

Unveiling of Portrait

The unveiling of the portrait quickly followed. As the photograph shows, it was arranged in the traditional fashion with flags to be drawn at the right moment. The site selected at the rear of the top table plus arrangement of the subsidiary tables provided everyone present with a direct view. The speaker, Mr. E. F. Lipsham, had adequate room, and was able to address the guest of honour at a distance of a few feet.

At the outset he said:—

Mr. President,

As most of us are new to unveiling ceremonies, I would like to explain that, after speaking of the portrait, I will draw the flags, and finally, read the details set out on the name plate, thus concluding my part of this function.

Mr. Lipsham then spoke directly to the Professor, saying:—"Sir: I wish first of all publicly to thank you for the many things that you have done in forwarding plans for the better education of our students.

I cannot let this occasion pass without some reference to our association together over the many past years. During those years I have personally received



Prof. A. K. Macbeth stands beside the unveiled portrait, with Mr. E. F. Lipsham at right.

from you many kindnesses, and I wish to add my personal thanks to the remarks of previous speakers.

Coming now to the portrait: In speaking to you, Sir, of this portrait I have tried to convey the impression that the Council of our Society found the money out of their funds.

Such is not correct. In this small measure I have deceived you, in the hope that I can now give you a pleasant surprise when I announce that the money has been subscribed by your own students and other members of our Society.

We sent out an appeal setting an upper limit for individual donations, and met with a wonderful response from South Australia. However, to me the most gratifying fact is that the response from the other States has been excellent. We have also received donations from New Zealand, New Guinea, and the Mother Country, England.

A few of the individual phrases in the many letters received are of great interest. With your permission I will quote some of them:—

From W.A.: "I consider the idea to be a splendid one. I found him a particularly fine man and teacher, and am sure that everyone taught by him thinks the same."

From Victoria: "I remember him well. His strength of character always impressed me, as well as his untiring efforts on behalf of Pharmacy."

From an S.A. country town (just one of the many received): "What a headache he once gave me! He has certainly done a great deal for us. His work on poison legislation is monumental."

From N.S.W.: "I well remember the wonderful work he did in helping me to pass my Organic Chemistry."

From New Zealand (in response to the air-mailed invitation to attend this dinner): "Please convey to the Professor my best wishes for a long and happy retirement. He has done much to raise the status of Pharmacy in South Australia."

Continuing, Mr. Lipsham said: "I think those quotations will prove to you, Professor, the readiness with which the writers forwarded their subscriptions, and the general esteem in which you are held by your past students.

Now for some details of the portrait itself.

The Council commissioned Mrs. Ingrid Erns, a New Australian, to paint this portrait.

As you will shortly see, it is a magnificent likeness. Unlike most painters, Mrs. Erns has produced a work of art which will stand up to detailed observation at a distance of a few inches. The eyes are particularly good. Its colouring is magnificent because the Professor has been painted wearing the robes of a Doctor of Science of the Belfast University.

The portrait was viewed by the Council of the University of Adelaide when they granted permission to hang it on the wall of the lecture room at the University.

A special place has been prepared, and I will be proud to hang it there tomorrow as a recognition of your work, Sir, and to provide inspiration and encouragement to all future students in Pharmacy.

It is very fitting that tomorrow marks the opening session of the big conversazione being organised by the University, when many members of the public will be seeing the portrait.

On behalf of the donors, the Council of the Pharmaceutical Society and members generally I now formally unveil this portrait. (Applause.)

May I, in conclusion, read to you the details which are inscribed upon the name plate? The plate itself is of dark brown plastic. The words which appear in white lettering read:

A. KILLEN MACBETH.

Commander of the Order of St. Michael and St. George.

Master of Arts: Doctor of Science.

Angas Professor of Chemistry 1928-1954.

Chairman of the Board of Studies in Pharmacy 1933-1954.

Gentlemen! Then comes a space on the plate: it is not a big space, but it serves to isolate the last line which reads:—

A tribute from Pharmaceutical Chemists in South Australia"

(Prolonged applause.)

Additional musical items then provided an interval and an opportunity for those present to view the portrait showing up plainly under a top lighting system.

SOUTH AUSTRALIA—Continued

Presentation of Grandfather Clock

Mr. A. Gould then called upon those present to resume their seats to allow the President to make a presentation to the Professor in the happy atmosphere which by this time had developed to a remarkable degree.

Mr. Russell's remarks were particularly acceptable and appropriate. They can be summarised in the following sentences:—

"It is pleasing that this function could be arranged on Professor Macbeth's birthday; a day on which the giving of presents is traditional.

We hope that this clock when installed in your home will give pleasure to yourself, Mrs. Macbeth and your family, and that its chimes will be a pleasant reminder of your association with Pharmacy.

You will notice that it bears a plate upon which is engraved the word, 'A tribute from Pharmaceutical



Grandfather clock presented to Prof. A. K. Macbeth (right). The President, Mr. A. A. Russell, is at the left.

Chemists in South Australia,' on whose behalf I make this presentation; with it go their best wishes for a long and happy retirement."

The President then opened the door of the clock and moved the hands to 10.00. After a few seconds the Westminster chimes rang through the room, quickly followed by ten deep notes of Big Ben.

As will be seen in the photograph, the grandfather clock is a handsome piece of furniture. The dial face markings, weight, etc., are of brass; the decorated case is of carved but very lightly polished cedar wood.

After shaking hands with the President, the Professor made his acknowledgments without resuming his seat.

At the outset he thanked everyone for the kindness which had been shown to him.

He stated he considered this evening to be another milestone in his life and in the consideration which he had always received from the Pharmaceutical Society.

He had always thought very highly of both the Board and the Pharmaceutical Council members, but he wittily stated that he had on this occasion been deceived in being brought along to unveil a painting and had then been overwhelmed with the presentation of the clock.

Amongst his deceivers he had no alternative but

to bracket his old associate at the University, Mr. Lipsham, for his efforts in respect to the portrait: he had never previously realised that the latter was such a very competent "liar."

However, how nice it had turned out to be deceived, and what treasured memories he would have of this evening when he had been brought along to meet his pharmaceutical associates under false pretences! The President in his remarks had referred to a small present, but one look was enough to dispel any ideas of smallness.

A grandfather clock was the thing that he had wanted all his life, and he had reached the present stage before he had that wish gratified. He added that he would therefore treasure the clock all his life, possibly more than otherwise might have been possible. The inscription was really unnecessary in bringing to mind those who made such happy thoughts possible.

Now in respect to the date chosen for the gathering: When Mr. Martin first approached him on the matter of a complimentary dinner, he mentioned that August 11 was his birthday. He then related to those present how in Durham in his early days in the Old Country his professor had told him on a certain day that it was his birthday. Not knowing the date in question, he asked what it was, and, when the professor replied "The 11th August," young Killen Macbeth had replied, "By God, it is my birthday too!" That incident had ever remained green in his memory, and he had never forgotten the 11th August as being his birthday.

He then spoke of the portrait and the painstaking effort put into it by Mrs. Ingrid Erns. Although he always considered he must be a restless person, he had sat still for the particular purpose for two hours at a time. He said he found it very difficult to do, but he had braced himself for the job and worked out a suitable technique. He found that if he sat and reminisced over incidents in his life it would break down the monotony and ease the difficulty of remaining in the set position.

In the beginning he went over in his mind the outstanding events in his life which had led up to the culminating point of his retirement as it now stood. In deciding those which were of primary importance he had been able to remain still for the necessary time.

He jokingly added that he could not relate all the things that he had thought about, but did go on to speak of an early incident of a mock wedding in which he took part at the Belfast University just prior to his own wedding. The latter did not prove to be as difficult for him as the former.

He also related other anecdotes of persons with whom he had been associated prior to his coming to Adelaide, and kept his audience interested and well amused.

He said he must admit that the portrait did not indicate amusement in any shape or form, and so he realised that he must have a real "poker" face because he had been filled with mirth at some of the incidents which had come to his mind during the sittings.

He concluded by thanking all those present, and in particular returned the compliment paid him by Mr. E. F. Lipsham, and quoted to the great amusement of those present, "He (Mr. Lipsham) seemed to have had considerable success in his efforts in making 'bullets for other people to fire.'"

The Professor received a prolonged ovation as he sat down.

The toast master quickly brought the evening to a close with the request that after the singing of "Auld Lang Syne" those present should remain seated until the President had conducted the guest to the door, so that he could personally shake each by the hand and wish him good night.

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SOUTH AUSTRALIA—Continued

PHARMACY BOARD

Monthly Meeting

The Pharmacy Board of South Australia met at 25 King William street, Adelaide, on August 10, at 7.45 p.m.

Present.—Mr. K. S. Porter (President) in the Chair, Messrs. E. F. Lipsham, A. E. Bowey, L. A. Craig, G. L. Burns, B. F. Mildren, D. C. Hill and the Assistant to the Registrar.

Relievers.—Miss N. J. Gerard to Mr. P. V. Roberts, Mr. C. J. Parker to Miss M. E. Croft, Mr. R. H. Brice to Mr. H. G. Collyer, Mr. D. W. Manhire to Mr. W. G. Humble, Mr. J. M. White to Mr. D. Finlayson, Mr. D. C. Farley to Mr. J. W. Flood and Mr. A. C. Holloway, Mr. A. G. Mathieson to Mr. C. J. Parker and Mr. A. G. Evans, Mr. T. P. Hemmings, Mrs. C. E. Wilkins to B. E. Webber's Pharmacy, and Mr. M. J. Palk to Mr. D. Mosel.

Inspector's Reports.—Reports of 14 visits in the Woodville district and 13 visits in the Glenelg district were received. The A/Registrar was instructed to take the necessary action where the reports indicated irregularities.

Labels.—Copies of labels received by the Inspector from proprietors and managers of premises inspected were examined and noted. In one case there was an irregularity, which the A/Registrar was directed to bring before the notice of the chemist concerned.

It was decided that a survey of labels used in country areas be commenced, and that the first section should be commenced in the near future.

Partnerships.—It was brought before the Board that there were two cases of the existence of partnerships which appeared to be ultra vires the Pharmacy Act. A sub-committee was appointed to peruse this matter.

Depots.—A request was received from a country district for the establishment of a depot. From the details given it would have been within four miles of a registered pharmacy, and was consequently not permissible under the Act.

Finance.—Statement for the month of July was submitted and adopted, and accounts totalling £8/0/11 were passed for payment.

Practising Certificates.—A Certificate of Identity for New South Wales has been issued on behalf of Mr. J. Davies.

Examination of Masters Under Regulations of the Pharmacy Act, Part III (e) (5).—A letter was received from the Board's solicitors, recommending that the form of indenture used for apprentices be altered by the addition of the words "(who if not of British birth must be approved by the Board)" after the words "pharmaceutical chemist" in the third line of Clause 3A of the indenture. This to effect the controlling of any New Australians who may not be considered capable of training apprentices through language difficulties.

Registration of Premises.—Applications were received and noted from Messrs. E. A. Hillman, P. G. Ball, J. J. Cracknell, D. W. Manhire, G. Harnett, C. J. Parker, C. L. Reid, M. M. Bassett, J. C. Shocroft, D. J. Standish, D. Finlayson, T. J. Sawyer and Mrs. M. H. Sweet.

Uniform Poison Legislation.—The President reported that Mr. R. C. McCarthy, representing South Australia, had been working for some time on the various poisons, collating information under a columnar system, as the poisons were controlled in this State. The matter was proceeding to an advanced stage, towards a conference which would lead to uniformity of State legislation on this matter.

Systemic Phosphorous Poisons.—Mr. Bowey reported on further inquiries he had made regarding systemic phosphorous poisons.

PHARMACEUTICAL SOCIETY

Council Meeting

The Council of the Pharmaceutical Society of South Australia met at 25 King William street, Adelaide, on August 2, at 7.45 p.m.

Present.—Mr. A. A. Russell (President) in the Chair, Messrs. E. F. Lipsham, K. D. Johnson, D. F. J. Penhall, Walter C. Cotterell, A. G. Evans and the Assistant to Secretary

Linstead Report on Hospital Pharmacy.—Mr. Lipsham reported that he had received a further letter of amplification from the Pharmaceutical Society of Great Britain regarding the relative costs of drugs. After submitting further information on perfusion liquids, he pointed out that his conclusion was that there was not a great deal of difference between hospital pharmacy generally in Great Britain and South Australia, having in mind the respective populations of each. He also reported that the information received from Great Britain had proved very helpful to those engaged in hospital practice in South Australia.

Students.—1956 Lectures. It was reported that arrangements were well advanced for the 1956 lecture timetable. The particular merits of a publication known as Clarke's "Applied Pharmacology" were pointed out, and authority was given for the purchase of a supply of this book for students.

August Conversazione at University.—Report was received that arrangements had been completed for the Pharmacy Section of the Conversazione at the University on August 12 and 13. Lectures would be delivered by the lecturers, and there would be visible workings on display.

A.N.Z.A.A.S. Conference.—The proposed Section "O" meetings at the A.N.Z.A.A.S. Conference were discussed, and the names of representatives from South Australian official pharmacy were noted. It was particularly gratifying to see the younger interested members going to such a conference. Messrs. A. A. Russell and K. D. Johnson were appointed official representatives of the Society, in addition to Mr. Walter C. Cotterell, who had already been appointed to such position.

Finance.—Statement for the month of July was submitted and adopted, and accounts totalling £871/19/2 were passed for payment.

Audited financial statements for the year ended June 30, 1955, were submitted and passed for presentation to the annual meeting.

A.P.F., 8th Edition.—Further correspondence on the 8th Edition was submitted to the meeting, and the Secretary's action in forwarding letter of thanks to Mr. and Mrs. N. C. Manning for the assistance they gave to South Australian representatives on their week-end visit to Melbourne to discuss manuscript details, was confirmed.

B.P. Dose Book.—Details of the cost and form of publication of a new B.P. Dosage Book in Victoria were received. The proof was examined by members, and it was decided not to proceed in the matter at this stage.

Post-graduate Talks.—It was recorded that interest had been shown by country members in the post-graduate talks which they could not attend for obvious reasons. In the circumstances it was decided to approach "The Australasian Journal of Pharmacy" to ask if space could be made available for publication of these lectures, at least in concise form.

Annual Report.—The President reported that the Annual Report had been drafted, and its presentation was left in the hands of the President and Secretary.

Illness of Mr. A. C. Holloway.—A report was received

SOUTH AUSTRALIA—Continued

that Mr. Holloway had called at the office and expressed his appreciation of the wishes contained in a letter sent him by the Council while in hospital. His steady improvement in health was noted with satisfaction.

Half-yearly Meeting.—As the Shell Theatre was the most suitable place for the half-yearly meeting, due to its provision for films, a tentative booking for Monday, February 27, 1956, had been made. This was necessary, due to the heavy call on this popular centre.

Pharmaceutico-Medical Liaison Committee.—It was resolved that the President and Vice-President be the representatives of the Council on the Pharmaceutico-Medical Liaison Committee for the ensuing year. It was also noted that no matters were pending necessitating calling of an early meeting.

THE GUILD

S.B.C. Meeting

The State Branch Committee of the South Australian Branch of the Guild met at 254 Sturt street, Adelaide, on August 8, at 7.45 p.m.

Present.—The President (Mr. Walter C. Cotterell) and Messrs. G. K. F. Scott, R. R. Patrick, E. Lloyd Miller, A. A. Russell, J. Retallick, V. L. Mitchell and the Secretary.

Arising from the minutes, the Secretary to enquire from Federal Secretary as to Southern States News distribution in other States.

New Members Elected.—Mr. P. G. Ball, Edwardstown and Carrig Chemists (Whyalla) Ltd., Arona Place, Golflands (Branch).

Trade and Commerce Agenda.—This was discussed in detail and the State representative was requested to act upon the suggestion put forward. The agenda was given to Mr. G. K. F. Scott.

Kotex, Etc.—This matter was discussed in full, and the letter of the Secretary to the Federal Merchandising Manager was approved.

Financial.—The statement presented to the meeting was approved, and accounts totalling £220/17/7 were passed for payment.

Antihistamine.—The replies from some of the States upon the sale of Antihistamine were read to the meeting. Secretary to report the details to Mr. Porter, when a reply is received from West Australia.

Report of S.B.C. Poll.—The Returning Officer, Mr. E. Lloyd Miller, reported the result of the poll, which would be submitted to the Annual General Meeting of members on August 30.

Nomination S.B.C. Officers.—Nomination forms were circulated for the positions of President, Vice-President and Treasurer to the S.B.C.

Returning Officer.—Mr. Miller was appointed as Returning Officer for the Election of Officers to the S.B.C.

Wages.—The President reported upon the new log submitted for a Managers' Award and matter so far approved.

Australasian Pharmaceutical Publishing Co. Ltd.—The President submitted a short statement, and the agenda for the Annual Meeting was approved.

Federal Delegate's Report.—The Federal Delegate (Mr. Walter C. Cotterell) reported upon the following matters: Boots Ltd., "Gilseal" Rusks, Andrews Liver Salt.

Pricing Officer's Report.—The Pricing Officer (Mr. G. K. F. Scott) gave a resume on the Pricing Officers'

Agenda. This agenda was discussed in detail, and the Pricing Officer took notes of the opinions expressed by members.

General.—It was arranged that Mr. Cotterell take in hand the matter of the invitation to the Pharmacy Students' Dinner.

The President was congratulated upon his Annual Report to be submitted to the Annual General Meeting of members.

Mr. Cotterell, as the retiring State President, thanked the members for their wholehearted support during his terms of office. All members declared their appreciation of the service rendered to the Guild and Pharmacy generally by Mr. Cotterell, and they were particularly pleased to think that his services would still be available to the Guild.

The meeting closed.

COMMONWEALTH NEWS

Major-General William Dudley Refshauge, O.B.E., M.B., B.S., M.R.C.O.G., who was recently appointed Director-General of Medical Services, Royal Australian Army Corps, in succession to Major-General Frank Kingsley Norris, has been appointed Honorary Physician to the Queen.

AMPOULES

Arising out of discussion at the 1954 meeting of the Australian and New Zealand Association for the Advancement of Science, a recommendation was made to the Standards Association that it consider the preparation of an Australian standard specification for ampoules.

The matter was taken up with a special committee, comprising representatives of the Commonwealth Serum Laboratories, firms concerned with the supply of material in ampoules, the medical profession and manufacturers of ampoules. The British Standard 795-1953 was studied, and it was found that, subject to minor amendments, this British standard was suitable for Australian use.

The Standards Association announces that it has now completed the endorsement of B.S. 795-1953, subject to certain amendments which are indicated on the endorsement slip. The principal alteration is the addition of dimensions for ampoules of nominal capacity 7 ml. and 10 ml. The Australian standard is designated as A.S. No. R.21-1955.

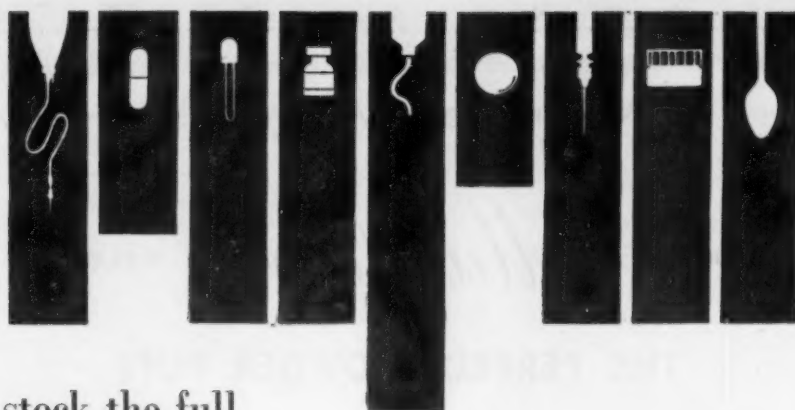
Copies of B.S. 795 and of the Australian amendments thereto can be obtained from the headquarters of the Standards Association, Science House, Gloucester and Essex streets, Sydney, and from branch offices in capital cities and at Newcastle.

LIVER FLUKE IN SHEEP

Good control of liver fluke can be obtained by drenching sheep with 5 c.c. of carbon tetrachloride during the winter, and attacking snails in swampy areas with bluestone about September and February, advise veterinarians of the Victorian Department of Agriculture.

The flock can be drenched twice or three times in late autumn and winter, but ewes should not be drenched closer than four weeks to lambing. The first drench is given four weeks before lambing, and a second, six to eight weeks after lambing. Wethers should have six to eight weeks between drenches.

Sheep should be handled carefully while being drenched and the job should be done in good weather and early in the day so that the sheep can be returned to a familiar paddock in time to get food and water before evening. Trouble rarely occurs, but if sheep do go down, each animal should be injected under the skin with $\frac{1}{2}$ oz. of calcium borogluconate in water, which has been allowed to cool after boiling.—Department of Agriculture News Bulletin (Vic.), No. 568, June, 1955.



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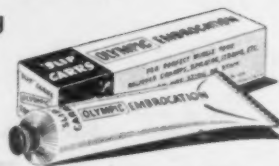
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WESTERN AUSTRALIA

PERSONAL and GENERAL

State News

Members desiring publication of personal items of interest are invited to write or telephone details to the Journal Correspondent in W.A., Mr. F. W. Avenell (phone BA 4082).

Mr. H. D. Fitch was out of action for a week on account of a septic arm. He is back on deck again now.

Mr. L. Krasenstein has opened a pharmacy next to the Grand Theatre in Murray street, Perth.

Mr. E. C. Hywood, of Foy's Pharmacy, has opened a pharmacy at Green street, Mt. Hawthorn.

Mr. H. O. Howling had an emergency operation on July 30, and spent 12 days in hospital. He is home again and making satisfactory progress.

Mr. and Mrs. W. L. Fauckner, of Claremont, have returned from their trip to Singapore. Miss K. W. McGuckin was in charge of the pharmacy.

Mr. D. G. White represented the W.A. branch at the Interstate meeting of the St. John Ambulance Association.

Miss S. Boor is relieving at the pharmacy whilst Mr. and Mrs. R. Donaldson, of Nedlands, are on a trip to the Eastern States.

Mr. H. I. Spence has purchased Mr. R. Branson's pharmacy at Corrigin. We understand that Mr. Branson will be leaving for England shortly.

Mr. and Mrs. C. J. Baird, of Hilton Park, have opened a branch pharmacy at Willagee Park. Mrs. Baird (nee Ruth Miller) is in charge of this new pharmacy.

Mr. A. M. Burking was in charge of the pharmacy at Norseman whilst Mr. A. R. Kierath had a holiday recently.

Our sympathy is extended to **Mr. B. B. Caldwell**, of Shenton Park, on the death of his brother, Dr. W. E. Caldwell, of Katanning, on August 11.

Lieutenant J. K. Little has returned to W.A. after some years in the Army. The past two years have been spent in Korea and Japan. He intends entering retail pharmacy again on the expiration of his leave.

Mr. and Mrs. E. B. Stacy have returned from their trip to the Eastern States. Mr. R. E. B. Stacy was in charge of the pharmacy at York during his father's absence.

Mr. J. R. K. MacMillan, of Victoria Park, spent a few weeks in hospital. Latest report is that he is home again and progressing satisfactorily. Miss M. Elsworth, Mr. A. Burking and Mr. D. T. Hughes have acted as locums during Mr. MacMillan's illness.

Congratulations to **Mr. E. A. Taylor**, of Boyup Brook, on his selection in the State Rifle Team to take part in the Commonwealth Rifle Match at Brisbane. Miss M. Elsworth is in charge of the pharmacy during Mr. Taylor's absence.

Birth—Congratulations to Mr. and Mrs. Nicholls (nee Lorna Fraser), of Osborne Park, on the birth of a son, Peter, on July 19.

Sympathy—We extend our sympathy to Sir Frank Gibson and family on the death of Lady Gibson on July 27. There was a very large assembly of pharmaceutical, government and civic representatives at the Karrakatta Crematorium. By the death of Lady Gibson Fremantle lost one of its leading residents. Born in Melbourne in 1879, she came early in the century to Leonora, on the Eastern Goldfields, with her husband, now Sir Frank Gibson, M.L.C. It was there that she first entered public life when her husband became Mayor of Leonora from 1912 to 1914, in which year they

moved to Fremantle, where her husband became Mayor in 1919. For 29 years she quietly but actively supported him in his civic duties and in his work as a member of the Legislative Council. Lady Gibson had three sons and a daughter, Lady Colebatch.

THE PHARMACY BALL

The nineteenth Annual Pharmacy Ball was held at the Embassy Ballroom, Perth, on July 26, and was generally agreed to be the brightest and best of these functions yet held.

Six hundred and sixty dancers occupied the floor from 8.30 p.m. to 1.30 a.m. Stan Elliott's orchestra supplied both old time and modern dance music. Two very beautiful floor shows were provided.

The President of the Pharmaceutical Council of W.A., Mr. R. I. Cohen, and his wife acted as host and hostess. A floral bouquet was presented to Mrs. Cohen by the Committee.

The President of the Guild (W.A. Branch), Mr. G. D. T. Allen, and Mrs. Allan, also executives of F. H. Faulding & Co. Ltd., D.H.A. (W.A.) Ltd., Rumbles Ltd. and Avery C. Guhl Ltd. were noticed amongst those present.

The proceeds of the function were devoted to the Chemists' and Druggists' Welfare Fund.

Thanks are due to the members of the Committee for their careful planning and attention to detail in making the arrangements. The Committee comprises Messrs. G. H. Dallimore (Chairman), R. Miller and D. Black (F. H. Faulding & Co. Ltd.), J. Evans and T. Hackett (D.H.A. (W.A.) Ltd.), and Dan White (Secretary).

PHARMACEUTICAL COUNCIL

Monthly Meeting

Extracts from Minutes of Council Meeting held on August 2.

Present—Messrs. R. I. Cohen, H. D. Fitch, R. W. Dalby, A. C. McWhinney, E. J. Nicholas, A. A. Baxter and F. W. Avenell (Registrar).

Correspondence—Several letters of a confidential nature were considered.

A request from D/Commissioner of Public Health that Fluorides be added to the 10th Schedule was agreed to subject to dentists as well as medical practitioners being authorised to prescribe.

Diploma for Miss Pearl Dornan was authorised and signed.

Indentures Transferred—N. Wende from J. D. Peterkin to J. C. Palmer; H. Schwartz from J. D. Henderson to A. Cohen; and Miss E. Moore from H. R. Howling to A. T. Barr.

Indentures Suspended and Resumed—L. I. McKenzie and E. J. Hogan, both suspended 4/1/55 and resumed 4/4/55.

Accounts totalling £302/12/8 were passed for payment.

Book for Library—A book on Parkinson's Disease was donated to the Library by Mr. H. D. Fitch.

Obituary—The President made reference to the passing of Lady Gibson, wife of Sir Frank Gibson, a former member of this Council.

Medical School Appeal—Registrar reported that £245/10/- had been received to date.

Meeting closed at 9.45 p.m.

WESTERN AUSTRALIA—Continued

THE GUILD

S.B.C. Meeting

At the July meeting of the Western Australian State Branch Committee of the Guild there were present: Messrs. G. D. T. Allan (Chair), R. J. Healy, W. G. Lewis, R. I. Cohen, W. T. Harrison, G. J. Skeahan, E. D. Edinger, S. J. Wilson and J. V. Hands.

Obituary.—The Chairman announced the death of three members, Messrs. K. Fogarty, R. J. Boylen and L. O. Sargent.

"Gilseal" Olive Oil.—Rumbles had requested that they be allowed to quote. On this question, action was suspended pending the receipt of quotes.

Mt. Lawley Zone.—The request for a revision on the price of Argyrol, which was made by this zone, was reported on by Mr. Lewis.

Annual Meeting.—The Annual Meeting is to be held on August 31 at Rumbles' boardroom. Mr. J. V. Hands, who was elected returning officer at the previous meeting, is unable, for personal reasons, to act, and it was resolved that Mr. H. D. Fitch be made returning officer in the place of Mr. Hands.

Medical School Appeal.—It was decided to launch a Medical School Appeal in conjunction with the Pharmacy Council. Further details will shortly be forthcoming, and it is desirable that as much support as possible be given to this very necessary addition to the University of Western Australia. Donations may be spread over three years. All donations are deductible from income tax.

Correspondence.—Mr. Allan (Chair) read to the meeting a letter received from P.A.D.W.A. re the margins some manufacturers request wholesalers to accept when a new line is being marketed. P.A.D.W.A. suggested that the Guild meet with them to discuss the matter. This meeting was approved by the Committee.

New Members Elected.—Messrs. E. C. Hywood, Mt. Hawthorn; M. J. Companti, Kojonup (taken branch pharmacy G. C. Porter); L. Krasenstein, Perth; and R. C. Cunningham, Inglewood.

Trade and Commerce Committee.

Nada.—Mr. Dalby reported that Nada stands were in the process of manufacture, and should be here in about six weeks.

Pricing Officer's Report.—Mr. Lewis requested that the following warnings be published to members:—

- (1) Recommending members be sure that the doctor has signed repeat authorisation at the foot of the form before dispensing these repeats. This omission could cause delay in payment.
- (2) Reminding members that surgical goods are not allowed to be supplied on form 70. If supplied on this form, claims will not be paid.

Tour of Geraldton Areas.—Mr. John V. Hands, Country Representative, gave a description of a tour made by him to Geraldton and the central wheat belt areas.

P.M.S.—Mr. Edinger brought up the question of the increase of the miscellaneous section of the "S" group list, the latest additions being Syrup Ferri Phos. Co. and Boracic Acid. Deep concern was expressed at this tendency, and it was resolved to write to Federal Office, requesting that strong objection be taken by the Federal Office to the transfer of these items from the dispensing list to the "S" group.

It was further resolved to publish a warning to our members regarding the purchase of ready-prepared P.M.F. from the wholesalers.

The meeting closed at 10.50 p.m.

August Meeting of the S.B.C.

The State Branch Committee of the Western Australian Branch of the Guild met at 190 Adelaide terrace, Perth, on August 9, at 7.30 p.m.

Present.—Messrs. G. D. Allan (Chair), R. D. Edinger, R. W. Dalby, J. V. Hands, W. T. Harrison, R. I. Cohen, W. G. Lewis, R. J. Healy, J. G. Skeahan, S. J. Wilson, and a number of members.

Correspondence:

Analyst: Reply from Federal Office re Guild Analyst to test Pensioner Prescriptions was read to the meeting. As yet nothing definite with any one analyst has been made, and Federal Office suggests that as there are so few prescriptions to be checked, we deal with them individually, and they will make the arrangements when the prescriptions are to be analysed.

A letter had been received from Mr. A. J. Smith stating that a local store has a full supply of several Chemist Only lines, and requesting that he be given guidance in the matter.

From Mr. F. M. Freemantle, of Katanning, stating that the local co-op. has stocks and was selling Chemist Only lines, and asking that this matter be investigated. Mr. Allan (chair) informed the meeting that he had been in contact with the warehouses concerned, and this matter was in the process of being rectified.

Mr. E. C. Knight's letter asking for advice on discount for Miners' fund dispensing was read. Mr. Allan (chair) reported that after discussion with the executive he had advised Mr. Knight.

New Member Elected.—Mr. R. M. Wiltshire, St. James Park.

Report on Retail Price List.—It was resolved that this list be divided amongst Committee members for checking, with the view of having N.S.W. publish this list for West Australia.

Pricing Conference.—The Agenda was discussed at length, and it was left to the Pricing Officer to get the best dispensing prices possible with the ultimate object of having a standard Australian price.

Federal Office Remits.—Remits for the Federal Council Meeting in October were decided upon.

Shipping Accounts.—Mr. Skeahan brought up the subject of shipping companies having direct accounts with the wholesalers, and it was resolved that this position be clarified.

College Accounts.—The question of boarding colleges in the metropolitan area having direct accounts with the warehouses was brought up, and it was resolved that the matter be investigated.

The meeting closed at 11.25 p.m.

SIDE-EFFECTS OF CHLORPROMAZINE

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Many toxic reactions to chlorpromazine were noted by G. F. Vaughan and his colleagues during their study of its effects on 224 neurotic and psychiatric patients (Lancet, 1955, 1, 1083). Minor fainting attacks, headaches, vague cramps, dryness of the mouth and transient pyrexia were so common that they were not recorded. In 22 per cent. of the patients, complications were sufficiently severe to stop treatment. Symptoms noted were: Severe collapse, pyrexia, pains in the legs and abdomen, rashes, gross confusion, severe headache, jaundice, vomiting, severe nausea, tachycardia, constipation, convulsions, facial oedema, parotitis, severe cyanosis of the legs and trophic ulcers, marked depression, cardiac failure and oedema of the ankles, auricular fibrillation, diarrhoea and haematemesis. The authors conclude that chlorpromazine requires careful supervision, particularly when given to out-patients.—*"The Pharmaceutical Journal,"* June 4, 1955.

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TASMANIA

PERSONAL and GENERAL

State News

Members desiring publication of personal items of interest are invited to write or telephone details to the Journal Correspondent in Tasmania, Miss M. L. Williams, 276 Argyle St., North Hobart (phone B 1010).

Welcome to Mr. Don Stewart, of Melbourne, who is in Hobart. We hope you will enjoy your stay with us.

As we go to press, Mr. Keith Jenkins is having a holiday; we hope he enjoys his stay on Bruny, and comes back to toil feeling very much better!

Miss Margaret Tribolet is off this time to New Britain, where she hopes to spend a few weeks on her uncle's plantation and enjoy a bit of warmth at the same time.

We understand that Mr. J. H. Gould and his wife have arrived safely in England, and we hope to have some news of them very soon.

Mr. and Mrs. Jack Beaumont and family are taking their car and touring up to Devonport, shipping the car to Melbourne, and then on to Sydney. Jack hopes to return to Hobart by one of the overseas liners.

Our Correspondent invites anyone who has any news, important or less important, to please contact her and help to make this column more interesting to everyone. (Address at top of this column.)

PHARMACY BOARD

Monthly Meeting

The Pharmacy Board of Tasmania met at 85 Elizabeth street, Hobart, on July 18, at 8 p.m.

Present.—Mr. H. H. Pearce (Chairman), Miss M. L. Williams, Messrs. A. G. Gould, J. M. Beaumont, E. H. Shield, F. H. Cartledge and the Registrar.

Pharmaceutical Register.—

Lawrence William Dean—A Certificate of Identity and Certified Photograph were received from the Pharmaceutical Society of Great Britain.

Philip Keith Stanford—Certificate of Identity and Certified Photograph were received from the Pharmacy Board of New South Wales.

Apprentices.—Alwyn Gerald McDougall to Eric John Bourke: Completion of indentures having been satisfactorily served, registration of completion was approved.

* Henry James Laskey to John Joseph Kaufman: Indentures were received to date from December 1, 1955. The meeting decided that these Indenture forms should be held over until commencement of period.

A letter was received from Mr. J. B. W. Browne, advising that he had been approached by a student for answers to questions which he had set in the last Prescription Reading Examination paper, and stated that he had replied, advising the student that examiners could not enter into direct correspondence with students. The meeting concurred with Mr. Browne's reply.

Supplementary Examinations.—The matter brought

forward at the Examiners' meeting by Dr. J. B. Polya, suggesting that an approach be made to the Technical Education Branch, asking that Supplementary Examinations be granted in Practical Pharmaceutical subjects.

The meeting decided that before making any approach the matter should be discussed with Dr. Burgin to determine the reason why supplementary examinations in other practical subjects are not granted at the Technical College, and also the effect upon practical dispensing.

Finance.—A financial statement was presented, showing a balance of £1081/10/5. Accounts totalling £83/8/6 were passed for payment.

Poisons Act.—Primaquin: After discussing this matter, the meeting decided that no action should be taken, particularly in view of the proposed introduction of the Commonwealth 8 Schedule system. It was considered that action should not be taken to include any additional items to our Poisons Schedule at this stage unless they were considered dangerous.

Statutory rule 1955, No. 69, was received.

Copies of the new consolidated Poisons Act 1916 were received from the Government Printer. The meeting decided that a copy, together with amendments to date, should be forwarded to each registered Pharmacist and apprentice.

Inspector.—The Registrar reported that in response to an advertisement for a part-time inspector only one application had been received.—The meeting decided that a further advertisement should be inserted in the "Mercury."

The meeting closed at 10.15 p.m.

PHARMACEUTICAL SOCIETY

Council Meeting

The Council of the Pharmaceutical Society of Tasmania met at 85 Elizabeth street, Hobart, on August 2, at 6.15 p.m.

Present.—Mr. E. H. Shield (President), Miss E. L. Knight, Messrs. L. J. McLeod, A. G. Gould and the Secretary.

Teaching Facilities.—The Secretary reported that he had spoken to the Superintendent of Technical Education, who advised that adjustments were being made to the allocations for this year, and that as soon as he had final details he would advise us of the position at the Technical College.

Post-graduate Lecture.—Mr. Shield reported that the lecture by Mr. G. K. Treleaven had proved to be most interesting and of considerable value to members.

The meeting decided that a letter of appreciation should be sent to D.H.A. Pty. Ltd. for making this lecture possible.

Northern Branch Minutes.—Minutes of general meeting of the Northern Branch, held on July 11, were received. It was noted that members at this meeting considered it would be inadvisable to transfer the headquarters of the Society to the north.

General Meeting.—Mr. Shield reported that Mr. Scott and Mr. Attiwill would be in Hobart on August 22, and would address a general meeting of the Society.

Financial.—Accounts totalling £110/14/6 were passed for payment.

The meeting closed at 7.15 p.m.

TASMANIA—Continued

THE GUILD

Executive Meeting

The Executive of the Tasmanian Branch of the Guild met at 73 Liverpool street, Hobart, on July 28, at 8 p.m.

Present.—Mr. G. M. Fleming (Chairman), Messrs. A. G. Gould, K. H. Jenkins, C. B. Dillon, T. A. Stephens, D. R. Crisp, and the Secretary.

A.N.Z.A.A.S. Conference.—Miss E. M. Hurst had indicated her willingness to attend this conference, and the meeting appointed her to represent this branch at Section "O."

Election of S.B.C.—The Secretary reported that three nominations, in addition to retiring members, had been received for the forthcoming election, from Mr. A. Fennell, Mr. A. G. Crape and Mr. W. G. Webb.

Mr. A. G. Gould was appointed Returning Officer for this election.

New Member Elected.—Miss Eileen Mary Hawkes, of 50B Coleman street, Moonah.

Over the Counter List.—Mr. Dillon reported that, following instruction from the last General Meeting to prepare such a list for Tasmania, he had considered the problem of varying prices. A further request had been forwarded to the Victorian Branch to see if such a list could be included with the Patents List.

The meeting decided to await a reply from Victoria.

Group Advertising.—The Chairman reported that the details regarding this scheme had been sent to each member, but he considered that the whole matter should be left for the incoming Committee.

Financial.—Accounts totalling £479/15/6 were passed for payment.

Annual Meeting.—The Chairman reported that the Federal President (Mr. Eric Scott) and the Federal Director of Public Relations (Mr. K. G. Attiwill) would be attending our Annual Meeting at Campbell Town.

Trade and Commerce Conference.—The agenda for this conference was discussed in detail.

By-Laws.—A letter from the Federal Secretary drew attention to an amendment necessary to our By-Laws to comply with the Constitution regarding the signing of cheques.

The meeting decided that Section 9 of our By-Laws should read, "All accounts will be passed for payment by the Committee, and shall be paid by cheque duly signed by any two members of the State Branch Committee."

The meeting closed at 9.20 p.m.

August Meeting of Guild Executive

The Executive of the Tasmanian Branch of the Guild met at 73 Liverpool street, Hobart, on August 11, at 8 p.m.

Present.—Mr. G. M. Fleming (Chairman), Messrs. T. A. Stephens, C. A. Robertson, C. B. Dillon, A. G. Gould, L. W. Palfreyman, D. R. Crisp, and the Secretary.

Over the Counter List.—Advice was received from the Victorian Branch that they did not consider it advisable to include an "Over the Counter" separate list, as the Drugs and Chemicals Price List was now being prepared for a reprint.

The meeting decided to await this reprint, and if

it did not fulfil the requirements of members, an extract list would be prepared.

P.B.A. and P.M.S. Analysis.—Advice was received from the Federal Secretary that analyses could be made in Victoria for any test prescription, and that arrangements would be made for each particular case as it arises.

Pricing Officers' Conference.—Letters received from Mr. J. B. Warland Browne and Mr. G. A. Calver regarding the agenda for this conference were read, and all items of the agenda were fully discussed.

Annual Report.—Details of the annual report were read and approved for circulation to members.

The meeting closed at 10.0 p.m.

"CANDY MEDICATION"

* Accidental Poisoning of Children

A committee on toxicology, formed by the Council on Pharmacy and Chemistry of the American Medical Association to study the health problems of household chemical products, has produced a report on "Candy Medication and Accidental Poisoning" (J. Amer. Med. Ass., 1955, 158, 44). Although pleasant medication in the form of sweets is a relatively recent development, and, according to the report, it is now used (in America) for antibiotics, antiepileptics, antihistamines, barbiturates, sulphonamides, salicylates and vitamins. These take the form of heart-shaped sweets, lollipops, chewing-gum, rock, fruit-flavoured syrups and dispersible chocolate or orange-flavoured granules for adding to milk or breakfast cereal.

The report enumerates the dangers attendant on such forms of medication: illness and deaths in children have been caused by over-indulgence in potent medicines disguised in the form of sweets; inaccurate dosage may result from palatable liquid forms of medication. Although statistics on morbidity and mortality are not sufficiently detailed to indicate the full influence of this form of medication, it is known that, in the under five age group, five times as many deaths from aspirin were reported in 1951 as in average pre-war year, i.e., before the general distribution of a flavoured form of children's aspirin.

Points put forward by physicians in favour of "candy medicines" are that taste itself does not appear to be the responsible factor in all cases of accidental poisoning in children, and that the frequency of accidents is caused by drugs being left within the reach of children. They refer to the difficulties of giving non-flavoured medicines to ill or irritable children, resulting perhaps in the child being sick and possibly aspirating vomitus. Its proponents believe that the benefits of sweetened medication outweigh any increased risk of accidental poisoning.

The report concludes that the predisposing factors underlying most cases of accidental poisoning are ignorance, carelessness and ready access to a harmful drug. Measures proposed to reduce these factors include precautionary labelling, safety containers and restrictive legislation. There is marked evidence of apathy by consumers to such admonitions as "Keep out of the reach of children." Safety devices, states the report, must be inexpensive. Restrictive legislation, although of value in establishing a minimum standard of conformance for products, usually has little direct influence on consumer practices. Carelessness is often caused by advertisements which imply a degree of safety not associated with the drug, and recognition of this cultivated ignorance on the part of the user would, it is considered, be a major step toward improving the safe use of common household medicaments.—"The Pharmaceutical Journal," June 4, 1955.



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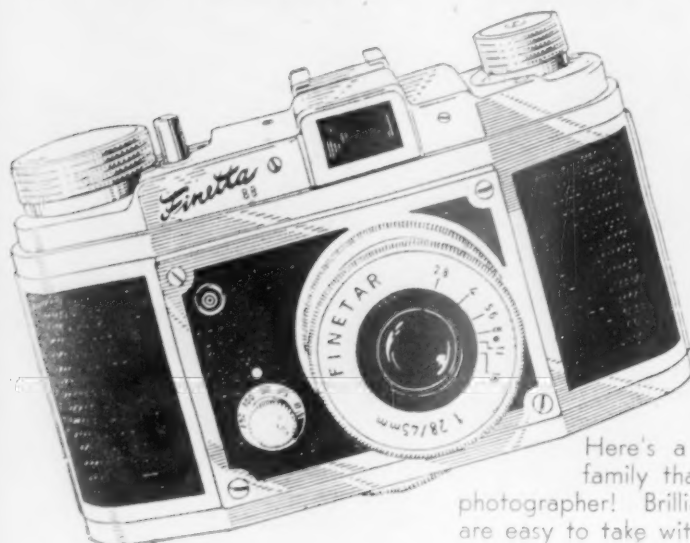
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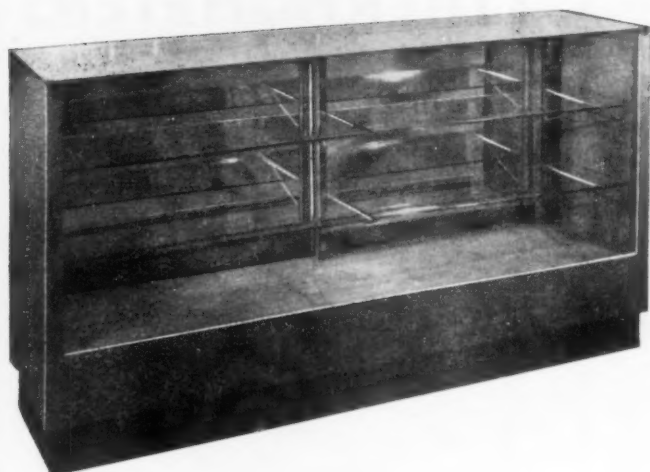
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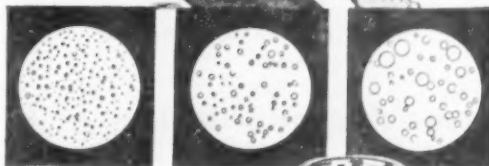
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THE

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RECORD SYRINGE

with the CERAMIC PISTON permits autoclave sterilisation with the piston in position

The ceramic piston is of fine porcelain fired at high temperature and possessing the same coefficient of expansion as the pyrex glass barrel.

It is completely impervious to chemical attack and in every respect is more suitable for the purpose for which it is used than any known metal.

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with Special Index Guide—
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IN CONNECTION WITH

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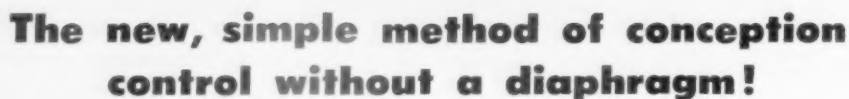
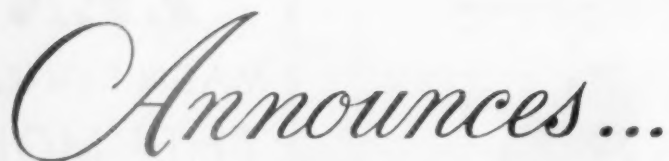
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- *Preceptin spreads quickly, is instantly spermicidal.*
- *Adheres well to the cervix.*
- *Is rapidly miscible with semen.*
- *Eliminates the diaphragm but retains its function.*

ORTHO PHARMACEUTICAL COMPANY
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Dr. Page-Barker's

SCURF AND DANDRUFF LOTION

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VULFIX

Shaving Brushes

*The Brush with
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BRUSHES TO SUIT ALL USERS
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**PURE BRISTLE—PURE BADGER
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**YOUR SUPPLIES ARE ASSURED THROUGH
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FOR NEW SOUTH WALES &
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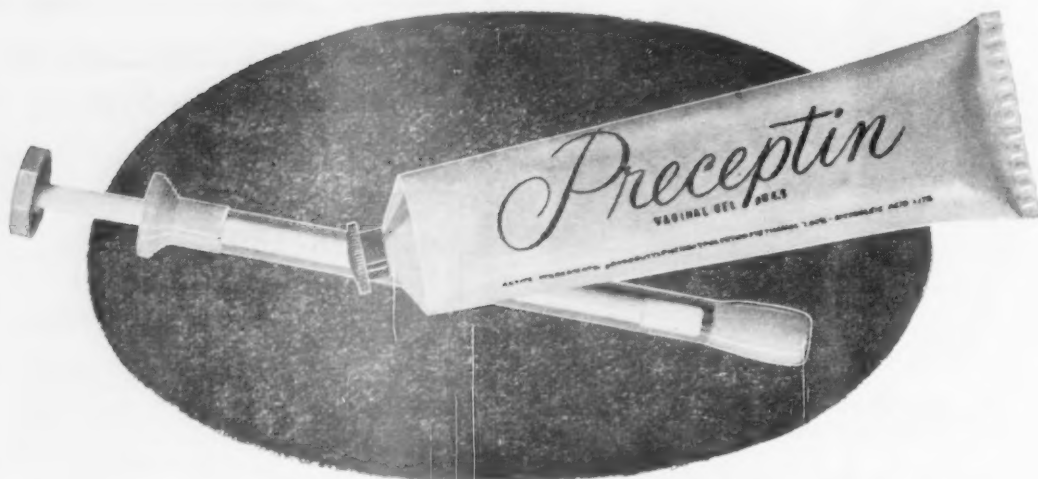
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AUSTRALIAN AGENCIES, 2ND FLOOR, ALBERT HOUSE,
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Announces...



The new, simple method of conception control without a diaphragm!

Recently developed synthetics used in the Preceptin formula create, when in contact with the moist vaginal mucosa, an effective barrier to the cervical os; in effect, a chemical diaphragm!

- *Preceptin spreads quickly, is instantly spermicidal.*
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IMPORTANT: Supplies are now available from your Wholesale Distributor. Comprehensive literature is available on application to

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GYNAMIN

The SCIENTIFICALLY balanced contraceptive—in tablet form. Obtainable from your usual Wholesaler.

*Take advantage of this
PERMANENT BONUS OFFER*

**You buy 6, you receive 7
You buy 12, you receive 15**

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Are British made, of traditional British quality. Will not fray or unravel at the edges. Provide necessary support, yet yield to every movement. Healthy and comfortable to wear. Allow free circulation. More durable—yet less than one-third the price of rubber and elastic web. Manufactured in 2 in., 2½ in., 3 in., 3½ in., and 4 in. widths. Give customer satisfaction and repeat sales. Build profits and goodwill.

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FOR OVER FIFTY YEARS
the name Rendell has been associated
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— fifty years spent in experiment,
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This wealth of information and unique
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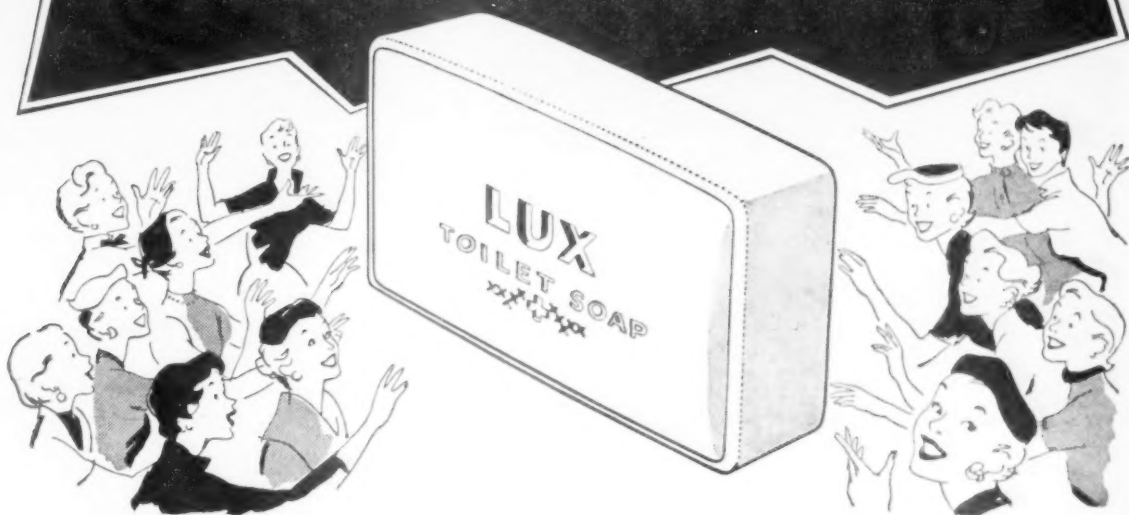
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and your Lux sales continue to soar because

- ★ **Over 2,000,000 listeners hear the one and only Lux Radio Theatre every Sunday**
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- ★ **other leading radio programmes**
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There's a handsome profit margin for you—



**25% on turnover—
mark up on cost 35%—
when you stock
and display bath size**

LUX TOILET SOAP

20

YEARS

PROGRESS

Gives confidence in

TODAYS TESTED FORMULA

CONCENTRATION		SPERM-motilities	
		CONTROL	EXPERIMENTAL
S	Before dilution	3	0
	After dilution	2+	0
$\frac{S}{2}$	Before dilution	3	0
	After dilution	3	0
$\frac{S}{4}$	Before dilution	3	1
	After dilution	2+	1+
$\frac{S}{8}$	Before dilution	3	2
	After dilution	3	2
$\frac{S}{16}$	Before dilution	3	2
	After dilution	3	1+

TESTS HAVE PROVED
CONCLUSIVELY THAT
UNDER NORMAL CONDITIONS
ALL SPERMATOZOA ARE
KILLED BY APPROXIMATELY

ONE-THIRD

OF A NORMAL APPLICATION

KAREEN

KAREEN

Is a thoroughly reliable and tested product with a "High Profit" margin.
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A PRODUCT OF THE U-TEX MANUFACTURING CO., TENNYSON STREET, ELWOOD, S.S.

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THE INFANTS' MEDICINE
OF 150 YEARS' STANDING

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FOR TEETHING AND
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£149/10/-



Re-Conditioned
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BABY SCALES, BRAND NEW "SECA"
New shipment arrives of
LATEST MODEL
32 LB. CAPACITY
NOW £13/19/6



Scales installed
free on per-
centage, or
rental from
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Disprin is a stable and palatable preparation in tablet form which dissolves rapidly in water to produce a solution of calcium aspirin. Disprin combines the convenience of aspirin with the therapeutic advantages peculiar to calcium aspirin. Being soluble it affords quicker relief than acetyl-salicylic acid with a much reduced risk of gastric irritation, even when administered in massive dosage, and being stable it is free from the unfortunate tendency of calcium aspirin to break down into unwanted decomposition products.



DISPRIN

Regd.

WELL-TOLERATED, RAPID IN RELIEF

★ Disprin tablets readily react in water to form a palatable solution of calcium aspirin.

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DEODORANT — PROPHYLACTIC

*for effective
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 Wholesale price 42/- per dozen tubes, plus tax
 Reliably known to Australian market for 25 years
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These products are recommended by the Racial Hygiene Association of Australia in all cases where family planning is a medical necessity.

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PACK, 14 to the dozen.			

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FOR FIRST-AID



IN THE SICK-ROOM

*The
all-purpose
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IT'S A PARKE-DAVIS PRODUCT

AN OUTSTANDING



Threadworm

TREATMENT

'ANTEPAR' brand Elixir is offered as a major advance in the treatment of threadworm infestation. Investigations in The Wellcome Laboratories of Tropical Medicine have proved that piperazine hydrate, the active ingredient of 'Antepar,' is far more efficient than any of the traditional oxyuricides, yet virtually non-toxic. In clinical trials, a 97 per cent. cure rate was achieved and no important side-effects were observed at the recommended dosage level.

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- Outstanding efficacy
- Rapid and complete cure
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